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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief

No. 1

WASHINGTON, D. C., DECEMBER 18, 1929

WINTER 1929-30

REVIEW OF THE SNOWFALL CONDITIONS FOR THE SEASON TO DATE

September had considerable snow for so early in the autumn—about the 6th and 7th—over much of Wyoming and portions of adjacent States, but in other mountain regions only a few light falls were noted.

In October the snowfall exceeded the usual average over extensive areas. Near and to eastward of the Mississippi River the principal snow came during the 22d-24th, considerable portions of eastern Iowa, northern Illinois, and southern Wisconsin receiving from 5 to 8 inches. From eastern West Virginia to southern New York the snowfall was confined mainly to the higher portions and was not heavy for the places and season. In the northern portions of New York and New England a few points had monthly amounts in excess of 12 inches. In the western half of the country substantially all the October snowfall came within the final five days. The amounts in northwestern Nebraska and over most of the Dakotas were comparatively heavy, and this was true also of most of Colorado and southern and eastern Wyoming where measures of 2 feet or slightly more were made; an elevated point in southeastern Texas had 8 inches. In the eastern Plateau there were moderate falls during October at the higher elevations, but to the westward and over the Sierra-Cascade Mountains there was hardly any snowfall.

November was cold and wintry during much of the month, particularly over the middle and northern districts from the Rocky Mountains eastward where considerable snow occurred, but the individual falls were mainly moderate, and no important interruption to traffic resulted. Precipitation continued light in the far West during this period, and the drought that had persisted for so many months in this district was still unbroken at the end.

December opened with severe cold over most central and northern districts from the Rocky Mountains eastward, with snow over much of this region eastward to the Great Lakes, and similar conditions existed during the following two days, the low temperatures extending into the Gulf and south Atlantic coast districts.

By the morning of December 9 much needed precipitation occurred over considerable areas of the far Northwest, and rainy or snowy conditions existed over much of that and near-by regions during the remainder of the first half of the month, greatly relieving the unusual dryness over those regions.

For the week that closed December 16 there was considerable snow over widely scattered districts near the northern border, and moderate rains in many other sections, particularly from interior and southern Texas northeastward toward the lower Lakes and thence eastward to the Middle Atlantic States. Some heavy rains occurred locally in southern Florida, but there was little or no precipitation near the upper Lakes and thence westward to eastern Montana and southwestward to the Mexican border and southern California. In the far West precipitation for that period ranged from 2 to more than 4 inches from central California northward to Washington.

Temperatures for this period were generally higher than normal over the greater part of the country, being from 10° to 20° or more above the seasonal normal over a wide area from the northern Plateau southeastward to near the south Atlantic coast, the weekly means in this area being among the highest of record for the season of the year.

DEPTH OF SNOW ON GROUND

Important snow depths now cover the northern districts from Montana eastward, and the northern mountains have scattered coverings at the higher elevations, but elsewhere in the western mountains there is little accumulated snow depth. At the present writing, snow is falling over a considerable area in or near

SNOW DEPTH AND ICE THICKNESS, 8 P. M., DECEMBER 16, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>New Hampshire</i>	<i>Inches</i>	<i>Inches</i>
Barrow.....	13	.....	Berlin.....	2	.....
Eagle.....	12	.....	Concord.....	2	5.0
Noine.....	20	.....	Hanover.....	2	.....
<i>California</i>			Keene.....	2	.....
Norden.....	11	.....	Pittsburg.....	9	.....
Relief.....	2	.....	<i>New York</i>		
<i>Colorado</i>			Albany.....	T.	*
Cumbres.....	2	.....	Beaver River.....	18	.....
Dillon.....	6	.....	Buffalo.....	T.	*
Steamboat Springs.....	3	.....	Canton.....	4	.....
<i>Idaho</i>			Lowville.....	24	.....
Big Creek.....	6	.....	Northville.....	4	.....
Ketchum.....	1	.....	Ogdenburg.....	6	.....
Vienna Mine.....	54	.....	Old Forge.....	11	.....
<i>Iowa</i>			Oswego.....	2	†
Des Moines.....	T.	5.0	Plattsburg.....	1	.....
Dubuque.....	T.	7.0	Saranac Lake.....	4	.....
<i>Maine</i>			Watertown.....	8	.....
Eastport.....	1	0.0	<i>North Dakota</i>		
Farmington.....	6	.....	Bismarek.....	10	15.0
Gardiner.....	3	4.0	Devils Lake.....	15	.....
Greenville.....	8	10.0	Ellendale.....	2	.....
Houlton.....	6	.....	Williston.....	12	14.0
Millinocket.....	10	.....	<i>Ohio</i>		
Van Buren.....	8	.....	Sandusky.....	0	4.0
<i>Massachusetts</i>			<i>Oregon</i>		
Concord.....	1	.....	Austin.....	3	.....
Holyoke.....	T.	6.0	Government Camp.....	11	.....
Williamstown.....	1	.....	Harrison Mine.....	12	.....
<i>Michigan</i>			Imperial Mine.....	19	.....
Alpena.....	6	4.0	Olive Lake.....	1	.....
Cadillac.....	4	.....	<i>South Dakota</i>		
East Tawas.....	4	.....	Huron.....	T.	8.0
Escanaba.....	11	6.0	Pierre.....	T.	13.5
Houghton.....	13	5.5	Rapid City.....	T.	.....
Mackinaw.....	12	.....	Yankton.....	T.	*
Marquette.....	17	*	<i>Utah</i>		
Port Huron.....	1	4.0	Silver Lake.....	11	.....
Sault Ste. Marie.....	16	*	<i>Vermont</i>		
<i>Minnesota</i>			Brattleboro.....	2	5.0
Campbell.....	4	.....	Northfield.....	3	.....
Collegeville.....	2	.....	Rutland.....	2	.....
Duluth.....	12	4.0	St. Johnsbury.....	4	.....
Ely.....	6	.....	<i>Washington</i>		
Fort Ripley.....	3	.....	Berne.....	30	.....
Grand Meadow.....	2	.....	Twisp.....	36	.....
Moorhead.....	4	10.0	Yakima.....	1	.....
Mora.....	1	.....	<i>Wisconsin</i>		
St. Paul.....	1	*	Eau Claire.....	1	.....
Thief River Falls.....	14	.....	Green Bay.....	2	5.0
<i>Montana</i>			La Crosse.....	T.	5.0
Big Timber.....	9	.....	Medford.....	2	.....
Browning.....	14	.....	Wausau.....	1	9.5
Haugan.....	13	.....	<i>Wyoming</i>		
Havre.....	16	.....	Dome Lake.....	17	.....
Helena.....	10	.....	Foxpark.....	10	.....
Kalispell.....	14	.....	Newcastle.....	2	.....
Loweth.....	4	.....	Sheridan.....	3	.....
Miles City.....	4	.....	South Pass City.....	1	.....
Red Lodge.....	4	.....	Yellowstone Park.....	1	.....

* Shore ice. † Floating ice. ‡ Ice gorged. § Measurement impracticable. T. indicates trace.

the Lake region, with prospects of early extension into other near-by regions.

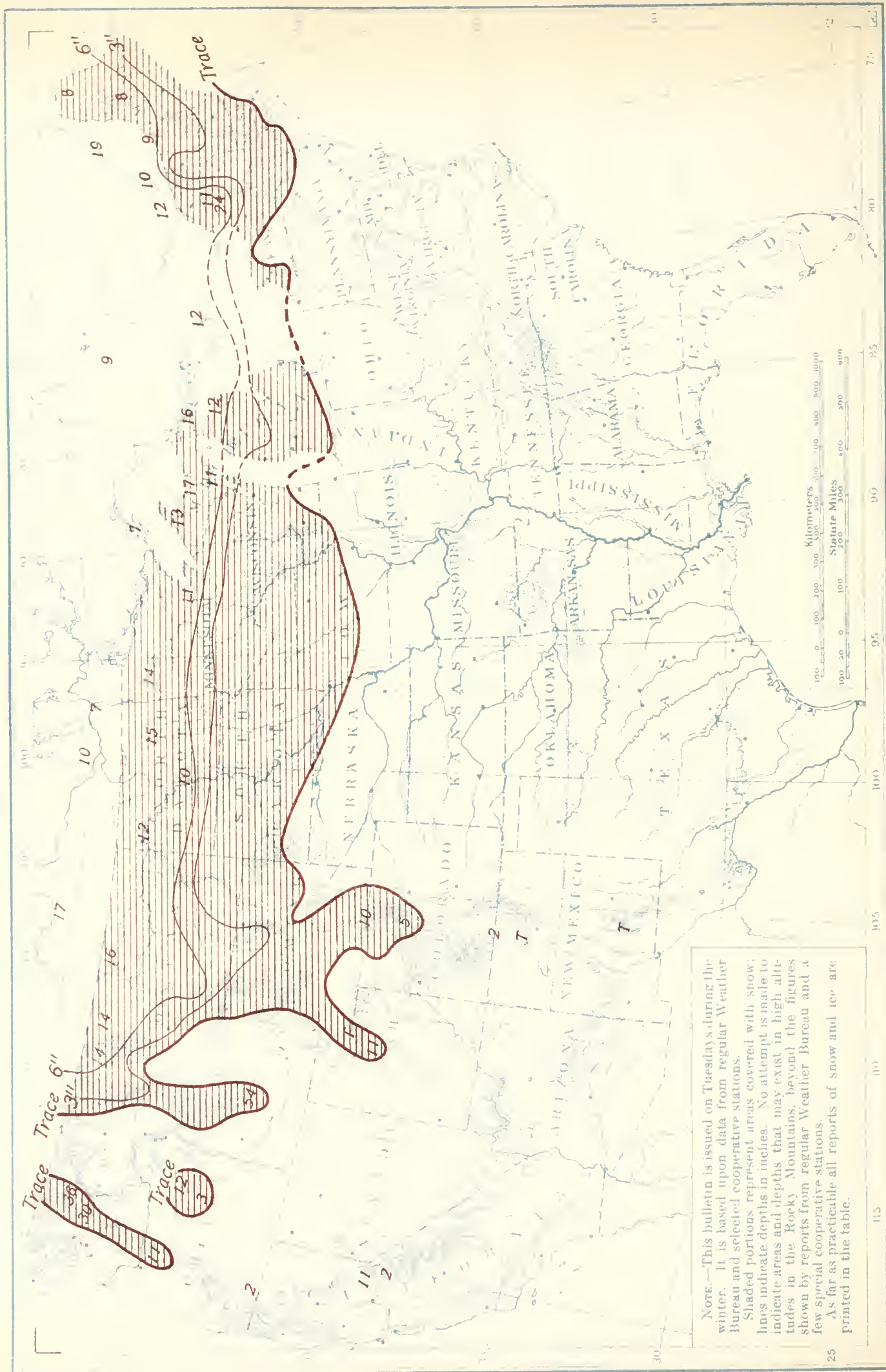
ICE IN RIVERS AND HARBORS

Important amounts of ice have formed on the upper Missouri and upper Mississippi Rivers and their tributaries, and considerable ice is reported from protected harbors of the upper Lakes.

P. C. DAY,

Meteorologist, in charge of Division.

Depth of Snow on Ground, 8 p. m., December 16, 1929



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 2

WASHINGTON, D. C., DECEMBER 27, 1929

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

The period, December 17 to 23, 1929, inclusive, was one of important and widespread temperature changes, local cold waves, wide distribution of snowfall and other forms of precipitation, and was generally winterish over most of the country from the Rocky Mountains eastward.

The week opened with an important cyclone over northern Texas, and precipitation, mostly snow, had occurred over most northern districts from the Pacific Coast eastward to the North Atlantic States, precipitation changing to rain from the eastern Plains to the Gulf States. During the movement of this cyclone to the eastward on the following few days, much of the eastern part of the country experienced extensive precipitation, the snowfall being heavy over the Lake region and Ohio Valley and to the northeastward. At the same time, precipitation again overspread the far Northwest and extended into the middle and southern Rocky Mountains by the morning of the 20th. During the 21st, the precipitation area overspread much of Texas and nearby areas, mostly in the form of snow, heavy falls being reported from points in central and northeastern Texas, northern Louisiana, and locally in Arkansas, amounts from 10 to 15 inches being reported from points in this area. During the 22d, the precipitation extended eastward over the Gulf States to the South Atlantic Coast, snow continuing in the interior of the Gulf States and northeast to the Appalachian region.

During the 22d and 23d, low pressure near the west Florida coast developed considerable intensity, and, moving northeastward, was central on the 23d over extreme eastern North Carolina, and precipitation had covered most areas from the Great Lakes and Mississippi Valley eastward, heavy rains occurring near the coast from central Georgia to eastern North Carolina, and snow was rather general in the northern precipitation area.

The week, as a whole, was decidedly cold over nearly all parts from the Rocky Mountains eastward. Over a wide area, from the eastern slope of the Rockies to near the Appalachians, the weekly averages of temperature were from 10° to 15° or even 20° or more, below the seasonal average. Beyond the Rocky Mountains, temperatures of the week averaged usually from 5° to 10° above the normal. Freezing temperatures reached all parts of the country, save central and southern Florida and the lower elevations of the Pacific Coast States and southwestern Arizona, and temperatures below zero were recorded over large areas in the upper Missouri and Mississippi Valleys, and locally in northern portions of New York and New England, the lowest reported, 34° below zero, occurring in North Dakota.

DEPTH OF SNOW ON GROUND

The depth of snow increased over that of the preceding week in all parts of the country where snow was reported a week ago, save for small areas of North Dakota and Montana, and locally in some of the far western mountains. The increases in depth during the week ranged upward to as much as 15 inches in portions of the lower Lakes, the northern Ohio drainage, and thence northeastward to New England, and smaller increases were noted over a narrow belt from northeastern Texas to the southern Appalachian Mountains, where snow had not been previously reported. But little snow has yet accumulated in the central and southern mountain districts of the West.

ICE IN RIVERS AND HARBORS

Heavy ice has already formed on the more northern rivers and lakes, but over the central districts only small amounts are reported, and practically no ice has yet formed on the rivers of the East from the Hudson southward.

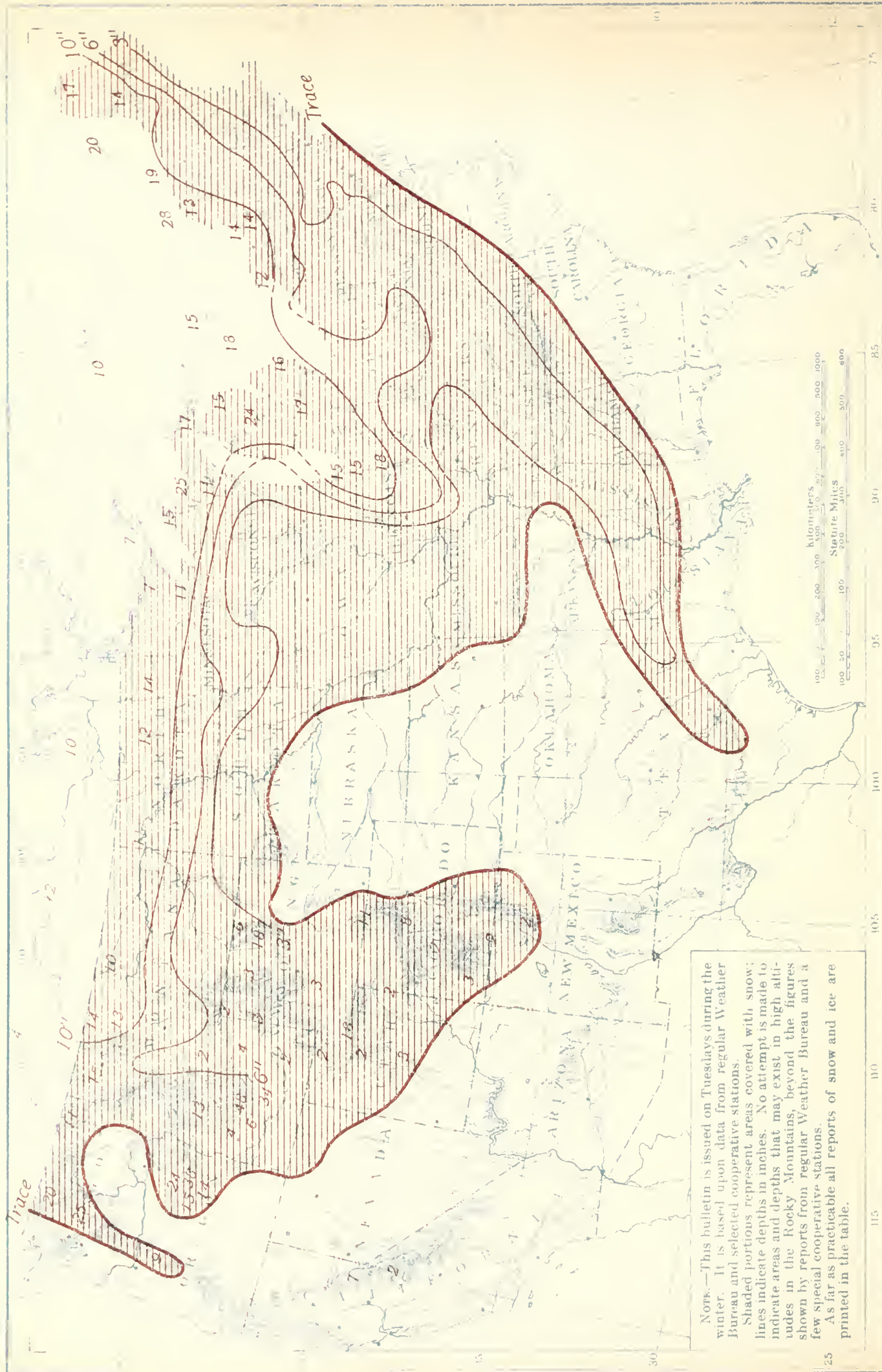
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., DECEMBER 23, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alabama</i>	<i>Inches</i>	<i>Inches</i>	<i>New Jersey</i>	<i>Inches</i>	<i>Inches</i>
Anniston	2	.....	Elizabeth	2	.....
<i>Colorado</i>			Newton	2	.....
Crested Butte	2	.....	Trenton	2	0.0
Durango	1	.....	<i>New York</i>		
Leadville	2	.....	Buffalo	12	*
Pueblo	1	0.0	Ithaca	9	.....
Rico	3	.....	New York	1	0.0
<i>Georgia</i>			Plattsburg	6	.....
Atlanta	1	.....	Rochester	8	.....
<i>Idaho</i>			Syracuse	14	.....
Idaho City	4	.....	<i>North Carolina</i>		
Mascot Mine	34	.....	Asheville	2	.....
Pocatello	2	.....	Charlotte	1	.....
<i>Illinois</i>			Greensboro	2	.....
Chicago	15	.....	<i>North Dakota</i>		
Peoria	3	4.0	Bismarck	9	15.0
Salem	7	.....	Ellendale	3	.....
Springfield	5	.....	<i>Ohio</i>		
<i>Indiana</i>			Cincinnati	2	0.0
Collegeville	15	.....	Cleveland	6	↑
Fort Wayne	10	.....	Columbus	8	0.0
Indianapolis	5	.....	Toledo	10	4.0
Notre Dame	12	.....	Wapakoneta	7	.....
Terre Haute	8	↑	Zanesville	5	.....
<i>Iowa</i>			<i>Oregon</i>		
Keokuk	T.	6.0	Baker	7	.....
Sioux City	T.	9.0	Imperial Mine	38	.....
<i>Kentucky</i>			Meacham	7	.....
Beattyville	5	.....	<i>Pennsylvania</i>		
Bowling Green	2	.....	Bellefonte	5	.....
Louisville	2	0.0	Confluence	4	.....
<i>Louisiana</i>			Erie	4	6.0
Shreveport	5	0.0	Harrisburg	4	↑
<i>Maine</i>			Scranton	5	.....
Greenville	14	10.0	<i>Rhode Island</i>		
Millinocket	14	.....	Providence	1	0.0
Portland	3	0.0	<i>South Carolina</i>		
<i>Maryland</i>			Greenville	2	.....
Baltimore	4	0.0	<i>South Dakota</i>		
Frederick	5	.....	Huron	T.	13.0
Oakland	4	.....	Rapid City	2	.....
<i>Michigan</i>			<i>Tennessee</i>		
Detroit	13	4.0	Chattanooga	4	0.0
Grand Haven	8	.....	Knoxville	6	0.0
Grayling	24	.....	Nashville	3	0.0
Lansing	17	.....	<i>Texas</i>		
Marquette	25	1.0	Austin	1	.....
Saginaw	17	.....	El Paso	T.	.....
<i>Minnesota</i>			San Antonio	T.	.....
Duluth	11	11.0	<i>Vermont</i>		
Mankato	3	.....	Northfield	8	.....
Minneapolis	1	.....	White River Junction	4	.....
Thief River Falls	14	.....	<i>Virginia</i>		
<i>Mississippi</i>			Lynchburg	4	0.0
Meridian	4	.....	Woodstock	5	.....
Vicksburg	3	0.0	Wytheville	7	.....
<i>Missouri</i>			<i>West Virginia</i>		
Hannibal	1	↑	Bluefield	5	.....
Kansas City	1	*	Charleston	6	.....
Rolla	2	.....	Clarksburg	8	.....
St. Louis	2	↑	Parkersburg	8	0.0
<i>Montana</i>			Wheeling	4	.....
Billings	3	.....	<i>Wisconsin</i>		
Choteau	13	.....	Milwaukee	4	.....
Helena	9	.....	Rhineland	10	.....
Missoula	1	.....	Spooner	4	.....
Stanford	8	.....	<i>Wyoming</i>		
<i>New Hampshire</i>			Cody	3	.....
Concord	5	7.0	Dome Lake	18	.....
Manover	3	.....	Lander	1	.....

* Shore ice. † Floating ice. ‡ Ice gorged. § Measurement impracticable.
T. indicates trace.

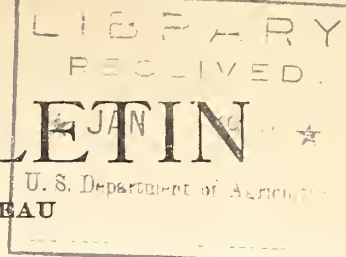
Depth of Snow on Ground, 8 p. m., December 23, 1929



NOTE.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations. Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist in high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations. As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief



No. 3

WASHINGTON, D. C., JANUARY 2, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK

No important cold waves or extensive precipitation, either rain or snow, were reported during the week ending December 30, 1929.

Some snow occurred during the day before Christmas in the Northwest and from the upper Ohio Valley and lower Lake region northeastward to New England, the snow being heavy in portions of the Northeastern States and changing to rain or sleet near the coast. Snow continued in portions of the Lake region during the following day, and some rain occurred along the north Pacific coast, but elsewhere the weather on Christmas Day was fair in all parts of the country, and similar conditions continued during the following few days.

By Saturday precipitation had again set in over the central Gulf States and northeastward to the southern Appalachian Mountains, and by Sunday morning the precipitation area had advanced into the Middle and South Atlantic States and into the Lake region, the rain changing to snow in the latter district, but fair weather persisted in other portions of the country under the influence of high barometric pressure that dominated the western and southern parts of the country during the closing days of the week.

The week, as a whole, was unusually warm over nearly all parts of the country, widely contrasting with the conditions of the previous week, only a small area in the Southeastern States and a few points in central California having temperatures below the normal, the week being especially warm in the central valleys. Freezing temperatures covered the greater part of the country, as might be expected for the period of the year, but there were practically no occurrences of zero temperatures.

Precipitation was light over practically all portions, only a few points in the far Northwest and in the districts from the Lake region and Ohio Valley eastward and southward having appreciable amounts.

DEPTH OF SNOW ON GROUND

Such snow as occurred during the week generally disappeared under the warmth existing, and much of that on the ground at the beginning of the week likewise disappeared. In fact, no part of the country showed an increase in the depth of snow cover save the extreme northeastern part. Over much of the Lake region and to the central parts of New York and to the southward over the mountain portions of Maryland, the Virginias, and to the southward, as well as in the Ohio Valley, the considerable body of snow on the ground at the end of last week largely disappeared, and similar conditions existed in the far Northwest. Only small amounts of snow now cover the moderate elevations in the northern mountain districts and practically none has accumulated in the far western mountains or the central and southern portions of those farther east.

ICE IN RIVERS AND HARBORS

Small increases in ice thickness were noted over the more northern districts, but even in these some decreases were noted, and there were practically no changes in other districts where ice was reported a week ago. No important ice has yet formed on the main streams of the East south of the Hudson, and that river is clear at Albany and to the southward.

P. C. DAY,

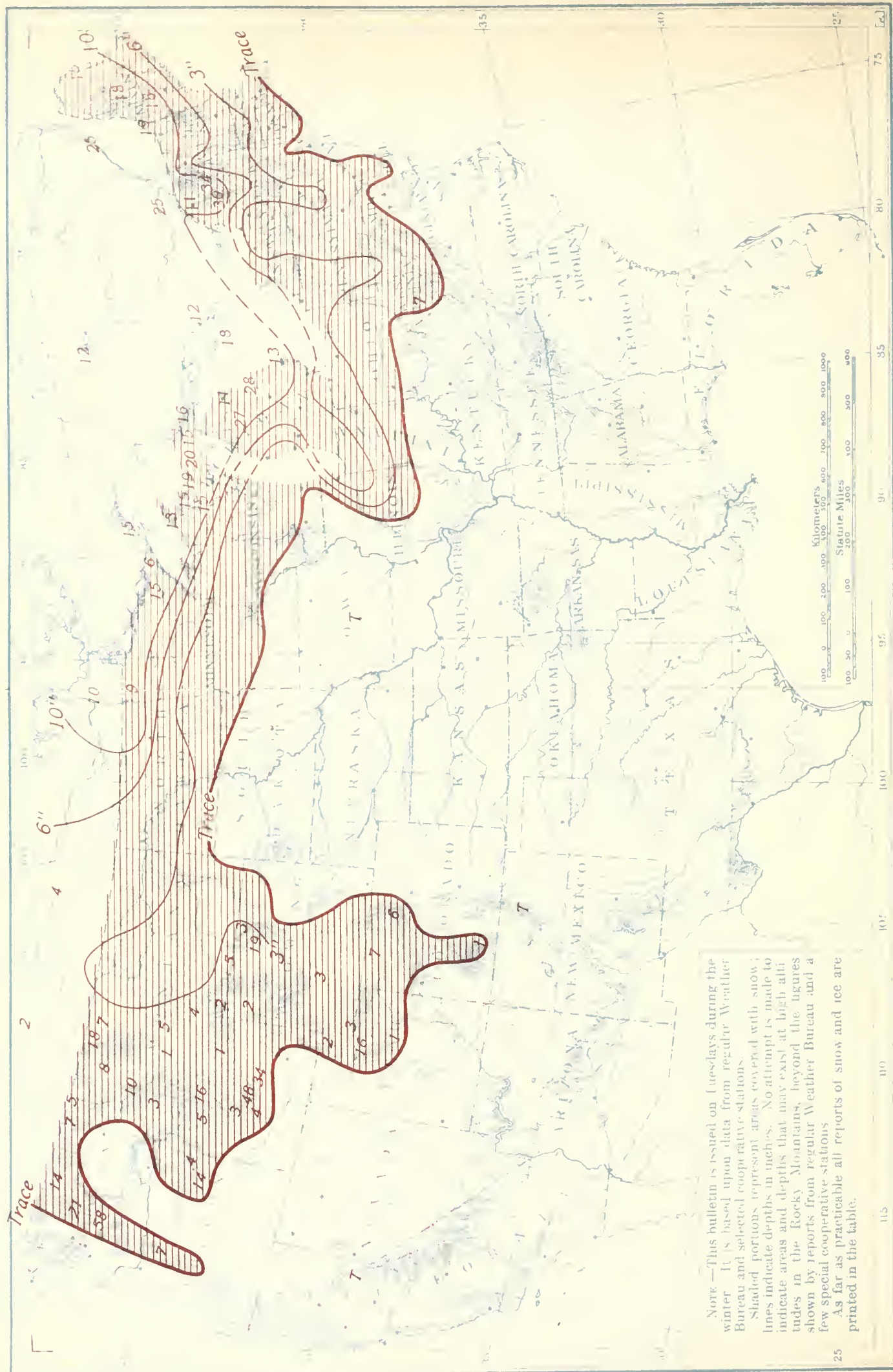
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., DECEMBER 30, 1929

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>New Hampshire</i>	<i>Inches</i>	<i>Inches</i>
Cordova.....	9	.....	Concord.....	5	9.0
Eagle.....	12	.....	Keene.....	5	.....
Fort Yukon.....	18	.....	Pittsburg.....	19	.....
<i>Colorado</i>			<i>New Jersey</i>		
Cumbres.....	1	.....	Cape May.....	T.	.....
Dillon.....	6	.....	Newton.....	1	.....
Steamboat Springs...	7	.....	<i>New York</i>		
<i>Idaho</i>			Albany.....	3	*
Big Creek.....	16	.....	Alfred.....	4	.....
Hailey.....	1	.....	Beaver River.....	34	.....
Kirkham.....	3	.....	Binghamton.....	3	.....
McCall.....	5	.....	Canton.....	11	.....
Pierce City.....	3	.....	Cutchogue.....	1	.....
Porthill.....	5	.....	Delhi.....	4	.....
Shake Creek.....	4	.....	Fredonia.....	1	.....
Soldier Creek.....	3	.....	Herkimer.....	6	.....
Vienna Mine.....	48	.....	Malone.....	8	.....
<i>Illinois</i>			Old Forge.....	11	.....
Peoria.....	T.	2.0	Oswego.....	5	†
Pontiac.....	6	.....	Saratoga Springs.....	5	.....
Windsor.....	1	.....	Watertown.....	6	.....
<i>Indiana</i>			<i>North Dakota</i>		
Fort Wayne.....	5	.....	Bismarck.....	4	17.0
La Fayette.....	4	.....	Devils Lake.....	10	.....
Marion.....	6	.....	Williston.....	6	14.0
Notre Dame.....	9	.....	<i>Ohio</i>		
Royal Center.....	4	.....	Cortland.....	7	.....
<i>Iowa</i>			Sandusky.....	2	5.0
Des Moines.....	T.	8.0	Tiffin.....	4	.....
Dubuque.....	0	7.0	<i>Oregon</i>		
<i>Maine</i>			Government Camp...	7	.....
Eastport.....	5	0.0	Olive Lake.....	14	.....
Farmington.....	18	.....	Wallowa.....	1	.....
Gardiner.....	8	8.0	<i>Pennsylvania</i>		
Greenville.....	18	12.0	Emporium.....	4	.....
Houlton.....	15	.....	Gettysburg.....	1	.....
<i>Michigan</i>			Gordon.....	4	.....
Alpena.....	11	8.0	Mifflintown.....	1	.....
Ann Arbor.....	3	.....	Seranton.....	2	.....
Benzonia.....	7	.....	Williamsport.....	2	.....
Coldwater.....	5	.....	<i>South Dakota</i>		
Detroit.....	8	4.0	Pierre.....	0	17.5
East Jordan.....	11	.....	Yankton.....	0	‡
Escanaba.....	11	9.0	<i>Utah</i>		
Grand Rapids.....	4	.....	Logan.....	2	.....
Houghton.....	13	10.5	Price.....	1	.....
Iron Mountain.....	14	.....	Silver Lake.....	16	.....
Iron River.....	15	.....	<i>Vermont</i>		
Lansing.....	8	.....	Brattleboro.....	5	9.0
Mount Pleasant.....	6	.....	Northfield.....	8	.....
Munising.....	20	.....	<i>Washington</i>		
Newberry.....	15	.....	Berne.....	21	.....
Port Huron.....	13	7.0	Paradise Inn.....	58	.....
Saginaw.....	15	.....	Sullivan Lake.....	7	.....
Sault Ste. Marie.....	16	6.0	Twisp.....	14	.....
<i>Minnesota</i>			<i>West Virginia</i>		
Duluth.....	6	12.0	Bayard.....	6	.....
Ely.....	6	.....	Camden-on-Gauley...	7	.....
Moorhead.....	1	18.5	Hinton.....	1	.....
Roseau.....	9	.....	<i>Wisconsin</i>		
St. Paul.....	T.	*	Fond du Lac.....	1	.....
<i>Montana</i>			Green Bay.....	1	7.0
Belton.....	18	.....	Medford.....	1	.....
Bozeman.....	4	.....	Wausau.....	1	13.0
Grant.....	1	.....	<i>Wyoming</i>		
Haugan.....	10	.....	Alta.....	2	.....
Kalispell.....	8	.....	Dome Lake.....	19	.....
Miles City.....	1	.....	Evanston.....	3	.....
Philipsburg.....	1	.....	Sheridan.....	3	.....
Red Lodge.....	5	.....	Yellowstone Park...	2	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., December 30, 1929



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 4

WASHINGTON, D. C., JANUARY 8, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED JANUARY 6

Important temperature changes were noted during the week, particularly over the more northern districts and in Canada, in connection with anticyclones along the northern border and cyclones in more southern regions.

About the 2d fairly low temperatures overspread an area from central Texas northeastward to the lower Ohio Valley, which moved eastward, reaching northern Florida on the morning of the 4th, with temperature falls of 20° to 30° over a considerable area near the Atlantic coast from central Florida to the Chesapeake Bay region. At the same time very low temperatures had overspread the extreme northern and northeastern districts. On the 6th a second important temperature change moved from the central Rocky Mountains southeastward into the Plains region, with temperature falls of 20° to 50°, which, at the evening observation of Monday, had extended into the central districts, the line of freezing temperatures threatening the west Gulf coasts.

Precipitation during the week extended into all portions of the Pacific coast, reaching southern California where no precipitation had previously occurred in many months, and moderate amounts occurring in most far-western mountains. Precipitation in moderate amounts occurred over most districts from the Mississippi Valley eastward, though only small amounts fell in the immediate Atlantic coast sections, and the snowfall was comparatively light save in some far-western mountains.

Average temperatures for the week were above normal in practically all districts, and the week was distinctly warm in most central and southern portions.

DEPTH OF SNOW ON GROUND

Important increases occurred during the week in some of the far-western mountain districts, the falls in the Sierra Nevada-Cascades ranging up to 3 feet or more at some of the high elevations. Some snow also occurred in the northern mountains of the Plateau region and the western slopes of the Rocky Mountains from Colorado northward. Elsewhere snowfall was light. The first important snow of the season occurred during the week just closed over the Sierra Nevada, but no permanent falls have yet occurred in the mountains of the Southwest.

In the Lake region important depths of snow were removed during the week, and similar conditions existed to the eastward, and there is now little snow from the Rocky Mountains eastward save in the more northern districts.

ICE IN RIVERS AND HARBORS

A few increases in ice thickness are reported on the northern rivers and on extreme western Lake Superior, but elsewhere in the Great Lakes there were general reductions in the amounts of ice as compared with the preceding week. No ice of importance has yet formed on the Ohio River, none is reported on the eastern rivers from the Hudson southward, and only small amounts have yet formed on the main rivers of New England.

P. C. DAY,

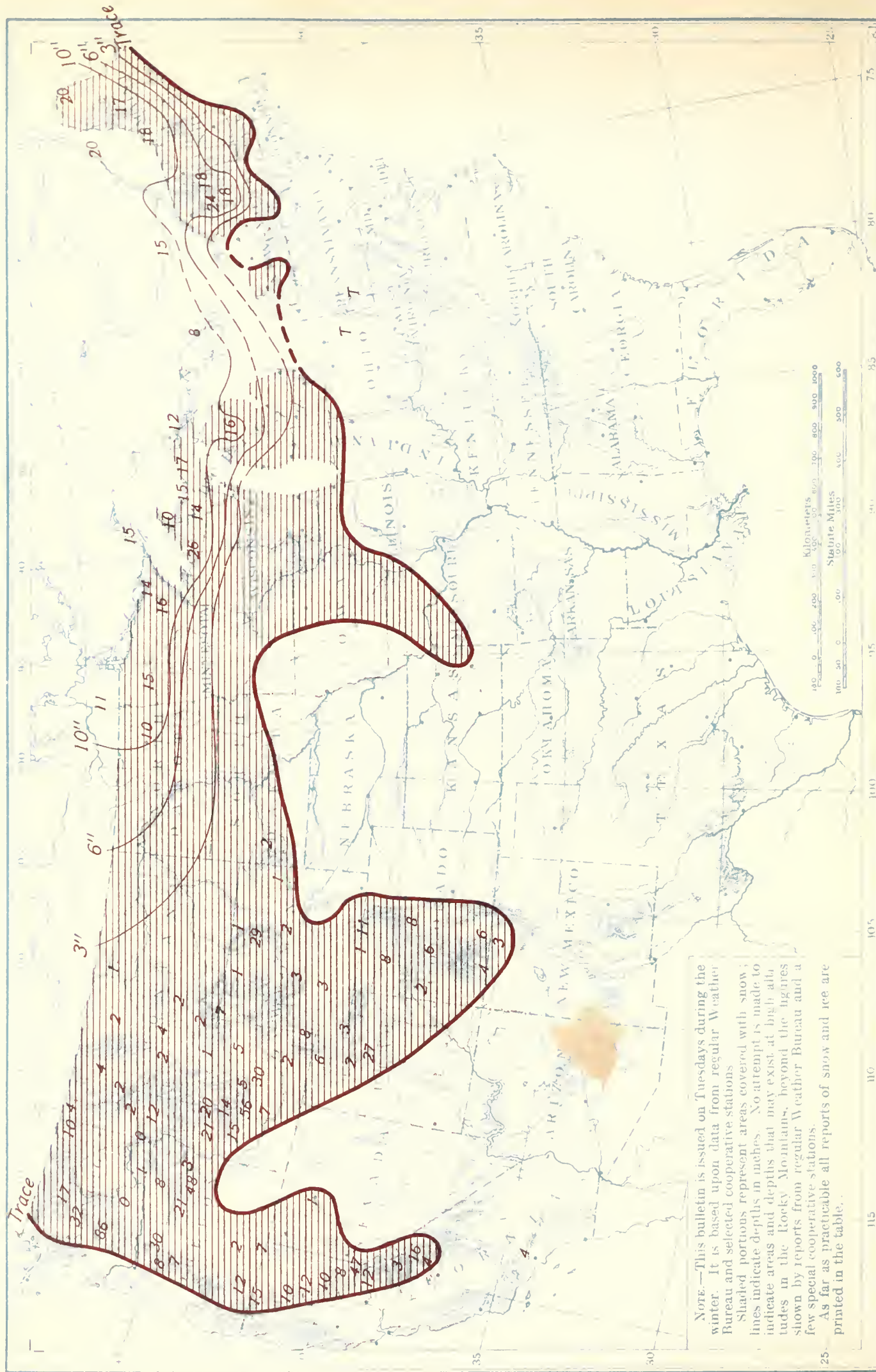
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., JANUARY 6, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>New Hampshire</i>	<i>Inches</i>	<i>Inches</i>
Barrow.....	15	.....	Berlin.....	7	.....
Bethel.....	5	.....	Concord.....	2	10.0
Eagle.....	5	.....	Hanover.....	7	.....
<i>California</i>			<i>New Mexico</i>		
Hat Creek.....	12	.....	Chama.....	3	.....
Huntington Lake....	16	.....	Cloudcroft.....	1	.....
McCloud.....	10	.....	<i>New York</i>		
Mount Wilson.....	4	.....	Albany.....	0	*
Norden.....	47	.....	Beaver River.....	18	.....
<i>Colorado</i>			Buffalo.....	T.	*
Crested Butte.....	6	.....	Canton.....	5	.....
Cumbres.....	6	.....	Lowville.....	24	.....
Dillon.....	8	.....	Northville.....	10	.....
Durango.....	4	.....	Ogdensburg.....	5	.....
Grand Junction.....	2	.....	Plattsburg.....	4	.....
Steamboat Springs....	8	.....	<i>North Dakota</i>		
<i>Idaho</i>			Bismarck.....	4	18.5
Idaho City.....	15	.....	Devils Lake.....	10	.....
Ketchum.....	5	.....	Ellendale.....	3	.....
McCall.....	21	.....	Williston.....	6	17.0
Mascot Mine.....	30	.....	<i>Ohio</i>		
Pocatello.....	2	.....	Charlestown.....	T.	.....
Spencer.....	5	.....	Sandusky.....	0	3.5
<i>Iowa</i>			Wauseon.....	T.	.....
Des Moines.....	T.	9.0	<i>Oregon</i>		
Dubuque.....	T.	9.5	Baker.....	3	.....
Keokuk.....	T.	3.0	Detroit.....	7	.....
<i>Maine</i>			Fish Lake.....	12	.....
Farmington.....	17	.....	Imperial Mine.....	48	.....
Gardiner.....	10	8.0	Lakeview.....	7	.....
Greenville.....	17	12.0	Meacham.....	8	.....
Millinocket.....	16	.....	Silver Lake.....	2	.....
Oldtown.....	6	.....	Siskiyou.....	15	.....
Portland.....	1	0.0	Welches.....	8	.....
Van Buren.....	20	.....	<i>South Dakota</i>		
<i>Michigan</i>			Huron.....	T.	13.0
Alpena.....	5	7.5	Pierre.....	T.	17.5
Battle Creek.....	2	.....	Rapid City.....	2	.....
Detroit.....	T.	2.0	Yankton.....	0	12.0
East Tawas.....	6	.....	<i>Utah</i>		
Escanaba.....	9	10.0	Ogden.....	1	.....
Grayling.....	16	.....	Salt Lake City.....	2	.....
Houghton.....	10	8.0	Silver Lake.....	26	.....
Ironwood.....	26	.....	Tooele.....	1	.....
Lansing.....	2	.....	<i>Vermont</i>		
Mackinaw.....	8	.....	Northfield.....	6	.....
Marquette.....	15	†	Rutland.....	3	.....
Port Huron.....	5	6.0	St. Johnsbury.....	8	.....
Sault Ste. Marie.....	12	6.0	White River Junction..	6	12.0
<i>Minnesota</i>			<i>Washington</i>		
Collegeville.....	1	.....	Berne.....	31	.....
Duluth.....	6	14.0	Paradise Inn.....	86	.....
Moorhead.....	4	19.0	Seattle.....	2	0.0
St. Paul.....	T.	*	Sullivan Lake.....	10	.....
Virginia.....	16	.....	Twisp.....	17	.....
<i>Missouri</i>			Walla Walla.....	1	.....
Hannibal.....	T.	*	<i>Wisconsin</i>		
Kansas City.....	1	†	Ashland.....	6	.....
<i>Montana</i>			La Crosse.....	T.	6.0
Dillon.....	1	.....	Wausau.....	T.	12.0
Havre.....	1	.....	<i>Wyoming</i>		
Helena.....	11	.....	Barnum.....	2	.....
Kalispell.....	4	.....	Cody.....	1	.....
Loweth.....	2	.....	Dixon.....	1	.....
Miles City.....	2	.....	Dome Lake.....	29	.....
Missoula.....	1	.....	Foxpark.....	11	.....
Thompson Falls.....	2	.....	Lander.....	3	.....
<i>Nevada</i>			Newcastle.....	1	.....
Reno.....	T.	.....	South Pass City.....	3	.....
Winnemucca.....	1	.....	Yellowstone Park.....	7	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., January 6, 1930



Note.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist at high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

U. S. Department of Agriculture

No. 5

WASHINGTON, D. C., JANUARY 15, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED JANUARY 13

The 7-day period closing Monday night was one of important and rapid changes in weather conditions, the most pronounced of these being the wide distribution of snowfall, the heavy rains in portions of the lower Mississippi and Ohio Valleys, and the large variations in the weekly means of temperature. Cold weather was persistent in most western districts and temperatures below zero were registered over wide areas between the Mississippi River and the Rocky Mountains, the lowest reported being nearly 40° below zero in North Dakota. The weekly averages were below normal from the Mississippi westward, the negative departures ranging from 15° to 25° over much of this area. In the eastern part, however, the week was mainly warm, the extremes going below zero over small areas only, and they did not go below freezing over large areas in the Southeast. The averages from the Mississippi River eastward ranged up to 10° or 20° above normal.

DEPTH OF SNOW ON GROUND

For the first time during the winter important depths of snow were recorded from the mountain regions of the Southwest, some high mountains in southern California reporting depths up to 5 feet, and depths up to 3 feet were reported from some of the mountains of Arizona. Heavy snow also occurred during the week over portions of the Great Plains, notably from Oklahoma and eastern Kansas northeastward to the western portions of the Great Lakes.

Compared with the preceding week, there has been a general increase of the snow depth over all areas from the mountains and moderate elevations of the Pacific States eastward to the Great Lakes. This is particularly the case from California and Oregon eastward and northeastward to Lake Michigan. To northward of this area there were only light falls in many districts, and from Texas northeastward to the Ohio Valley there was little snowfall that remained on the ground at the end of the week. Over the eastern districts but little snow occurred, save locally near the lower Lakes and to the northeastward, and some small amounts disappeared during the week in this area.

In the eastern Canadian Provinces and northern New England there continues a considerable body of snow.

ICE IN RIVERS AND HARBORS

Due to continued cold in the Northwest, considerable new ice formed on the rivers and lakes of that region, and thick ice now covers the upper courses of the Missouri and Mississippi Rivers, while a little ice is reported even from the Snake River. The amount of ice in the Missouri ranges from 14 inches at Sioux City, Iowa, to 22 inches at Williston, N. Dak. In the Mississippi River the thickness ranges from 6 inches at Keokuk, Iowa, to 12 inches at La Crosse, Wis. In the Great Lakes considerable ice has formed on the harbors of Lake Superior and over the northern parts of Lakes Huron and Michigan, but only small amounts appear in the southern parts of those lakes or on the harbors of Lakes Erie and Ontario. No ice of importance has yet formed on the Ohio, or its principal tributaries, and none of appreciable thickness appears to have formed on the rivers of the Atlantic Coast States south of and including the Hudson. Ice 12 inches thick is reported from the interior of Maine, but elsewhere in New England the amounts are still comparatively small and no ice of importance has yet been harvested.

P. C. DAY,

Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., JANUARY 13, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Montana</i>	<i>Inches</i>	<i>Inches</i>
Eagle	11	.....	Great Falls	8	.....
Juneau	1	.....	Kalispell	4	.....
Nome	42	.....	Miles City	2	.....
<i>Arizona</i>			Red Lodge	5	.....
Flagstaff	28	.....	<i>Nebraska</i>		
Grand Canyon	10	.....	Imperial	5	.....
Prescott	29	.....	Lincoln	5	.....
<i>California</i>			O'Neill	6	.....
Inskip	47	.....	<i>Nevada</i>		
Norden	66	.....	Austin	5	.....
Red Bluff	4	.....	North Fork	2	.....
Squirrel Inn	60	.....	<i>New Hampshire</i>		
<i>Colorado</i>			Keene	4	.....
Denver	2	.....	Pittsburg	15	.....
Grand Junction	3	.....	<i>New Mexico</i>		
Leadville	5	.....	Elizabethtown	8	.....
Rico	16	.....	Gamercio	6	.....
<i>Idaho</i>			<i>New York</i>		
Boise	4	.....	Corinth	8	.....
Hailey	5	.....	Dansville	1	.....
Kirkham	18	.....	Oswego	2	0.0
Lewiston	1	†	Saranac Lake	6	.....
Montpelier	8	.....	<i>North Dakota</i>		
Porthill	4	.....	Bismarck	5	21.0
Vienna Mine	62	.....	Williston	6	22.0
<i>Illinois</i>			<i>Ohio</i>		
Chicago	3	.....	Sandusky	1	2.0
Freeport	9	.....	Wauseon	2	.....
La Salle	4	.....	<i>Oklahoma</i>		
Peoria	4	4.0	Broken Arrow	3	.....
<i>Indiana</i>			Oklahoma City	4	.....
Fort Wayne	1	.....	<i>Oregon</i>		
Notre Dame	3	.....	Government Camp	20	.....
<i>Iowa</i>			Portland	1	0.0
Albia	4	.....	Roseburg	5	.....
Charles City	4	.....	Wallowa	2	.....
Davenport	7	4.0	<i>South Dakota</i>		
Dubuque	9	11.0	Pierre	1	23.5
Iowa Falls	5	.....	Rapid City	3	.....
Sioux City	2	14.0	<i>Texas</i>		
<i>Kansas</i>			Amarillo	1	.....
Dodge City	1	.....	<i>Utah</i>		
Osage City	8	.....	Duchesne	6	.....
Phillipsburg	2	.....	Logan	6	.....
Wichita	5	.....	Milford	6	.....
<i>Maine</i>			Moab	7	.....
Eastport	5	0.0	Modena	8	.....
Houlton	13	.....	Price	6	.....
<i>Massachusetts</i>			Provo	8	.....
Amherst	4	.....	Watson	5	.....
Concord	2	.....	<i>Vermont</i>		
<i>Michigan</i>			Brattleboro	5	*
Ann Arbor	4	.....	Burlington	3	0.0
Escanaba	10	14.0	Enosburg Falls	6	.....
Grand Haven	5	.....	Rutland	2	.....
Iron River	14	.....	White River Junction	4	.....
Mount Pleasant	4	.....	<i>Washington</i>		
Sault Ste. Marie	11	13.0	Seattle	1	0.0
<i>Minnesota</i>			Walla Walla	2	.....
Baudette	12	.....	<i>Wisconsin</i>		
Duluth	10	17.0	Fond du Lac	6	.....
Fort Ripley	6	.....	Green Bay	2	8.0
Minneapolis	6	.....	Madison	5	.....
Moorhead	4	21.0	Milwaukee	7	.....
Worthington	6	.....	Spooner	8	.....
<i>Missouri</i>			Stevens Point	3	.....
Columbia	4	.....	<i>Wyoming</i>		
Rolla	2	.....	Alta	8	.....
St. Joseph	5	.....	Cheyenne	2	.....
Unionville	12	.....	Sheridan	3	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Trace

NOTE.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist at high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.

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As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 6

WASHINGTON, D. C., JANUARY 22, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED JANUARY 20

The week just closed, like that immediately preceding, was notable for the persistence of anticyclonic conditions throughout the interior portions of the country, the rapid and important changes of temperature, the wide distribution of snowfall, and the low temperatures reaching over the greater part of the country, particularly into the west Gulf and lower Rio Grande districts.

The temperature continued low over most interior districts, the weekly means averaging from 15° to 30° or more below normal over much of the country from Texas and the lower Mississippi Valley northwestward to Canada; in fact, all parts had weekly means below the average, save small areas along or near the Atlantic coast from eastern North Carolina to New England, portions of central and southern Florida, and from the coast of central California southeastward to central Arizona. Temperatures below zero extended southward to central Texas, and they were below 20° over nearly the entire Rio Grande Valley and eastward to the central Gulf region.

Precipitation was widely distributed, but the amounts were not excessive in the regions where severe floods are now existing.

Snow occurred over wide areas, and some moderate to heavy falls were reported from the middle Plains northeastward to New England and at points in the Rocky Mountain and northern Plateau regions.

DEPTH OF SNOW ON GROUND

The snow-covered area is now materially greater than reported a week ago, a considerable area from central Texas and southern Oklahoma northeastward to central New York, bare a week ago, now having some cover. The depths on ground increased generally from the interior portions of Washington and Oregon eastward, some decreases being noted in a few northern districts, probably due to wind or settling; and there was important melting and settling in the Sierra Nevada and the southern mountains of California, Arizona, and New Mexico.

There is generally much less snow in the far western mountains than usual at this period of the winter, but in the more eastern ranges of the Rocky Mountains the amounts of stored snow more nearly approach the normal. Reports indicate there has been much snow drifting and many unimproved roads are badly blocked.

ICE IN RIVERS AND HARBORS

Considerable additional ice formed during the week in the central and northern rivers and lakes, the Missouri is apparently ice-coated throughout its length, and the Mississippi River has floating ice as far south as Cairo; the main stream of the Ohio appears to be comparatively free of ice south of Pittsburgh, and floating or shore ice is reported in most of the rivers from the James northward, with heavy ice in central Maine.

In the Great Lakes the harbors are mostly closed, except where they are kept open artificially, and the amounts increased materially during the week, particularly over the lower chain.

Not much ice has apparently been gathered in the important districts of the Northeastern States where large supplies are usually stored. In country districts ice for home use has probably been gathered in most localities where provision is usually made for its storage.

P. C. DAY,

Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., JANUARY 20, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Arizona</i>	<i>Inches</i>	<i>Inches</i>	<i>Nebraska</i>	<i>Inches</i>	<i>Inches</i>
Bright Angel	32	.....	McCook	4	.....
Fort Apache	4	.....	North Platte	4	.....
Williams	24	.....	Omaha	13	13.0
<i>Arkansas</i>			<i>Nevada</i>		
Bentonville	6	.....	McGill	4	.....
Fort Smith	4	0.0	Winnemucca	10	.....
<i>California</i>			<i>New Hampshire</i>		
Sierraville	12	.....	Berlin	10	.....
Yosemite	8	.....	Concord	7	11.0
<i>Colorado</i>			<i>New Mexico</i>		
Cumbres	67	.....	Chama	21	.....
Dillon	20	.....	Cloudcroft	6	.....
Pueblo	1	0.0	Santa Fe	1	.....
<i>District of Columbia</i>			<i>New York</i>		
Washington	2	*	Beaver River	15	.....
<i>Idaho</i>			Binghamton	4	.....
Idaho City	22	.....	Buffalo	8	3.0
Ketchum	15	.....	Saratoga Springs	6	.....
Mascot Mine	42	.....	Syracuse	2	.....
Pierce City	20	.....	Warwick	6	.....
Pocatello	11	.....	Watertown	12	.....
<i>Illinois</i>			<i>North Dakota</i>		
Monmouth	13	.....	Ellendale	2	.....
Springfield	3	.....	Williston	6	29.0
Urbana	3	.....	<i>Ohio</i>		
Waukegan	8	.....	Columbus	2	0.0
<i>Indiana</i>			Cortland	5	.....
Indianapolis	2	.....	Toledo	2	3.5
La Fayette	3	.....	<i>Oklahoma</i>		
Terre Haute	5	*†	Oklahoma City	10	.....
<i>Iowa</i>			<i>Oregon</i>		
Des Moines	12	12.0	Baker	10	.....
Keokuk	11	11.0	Imperial Mine	48	.....
Pocahontas	8	.....	Portland	8	0.0
Waterloo	12	.....	Siskiyou	19	.....
<i>Kansas</i>			<i>Pennsylvania</i>		
Concordia	4	.....	Allentown	8	.....
McPherson	4	.....	Chambersburg	7	.....
Topeka	9	.....	Erie	3	4.0
<i>Kentucky</i>			Reading	8	2.0
Earlington	2	.....	Williamsport	4	.....
Louisville	1	0.0	<i>South Dakota</i>		
Williamsburg	1	.....	Pierre	2	24.5
<i>Maine</i>			Yankton	8	20.0
Gardiner	8	12.0	<i>Utah</i>		
Greenville	24	20.0	Cedar City	3	.....
Houlton	16	.....	Salt Lake City	8	.....
<i>Maryland</i>			Silver Lake	55	.....
Baltimore	3	0.0	<i>Vermont</i>		
Frederick	7	.....	Bellows Falls	8	.....
<i>Michigan</i>			Northfield	8	.....
Cadillac	12	.....	St. Johnsbury	8	.....
Detroit	4	6.0	<i>Washington</i>		
Grand Rapids	7	.....	Paradise Inn	72	.....
Houghton	21	14.0	Tacoma	2	0.0
Ironwood	40	.....	Twisp	17	.....
<i>Minnesota</i>			Walla Walla	11	.....
Collegeville	8	.....	Yakima	3	.....
Ely	18	.....	<i>West Virginia</i>		
Montevideo	8	.....	Bayard	4	.....
St. Paul	12	6.5	Parkersburg	2	†
<i>Missouri</i>			<i>Wisconsin</i>		
Kansas City	10	7.0	Ashland	18	.....
Macon	11	.....	La Crosse	11	15.0
St. Louis	7	†	Racine	10	.....
Springfield	6	.....	<i>Wyoming</i>		
<i>Montana</i>			Dome Lake	31	.....
Big Timber	5	.....	Foxpark	17	.....
Helena	11	.....	Lander	4	.....
Thompson Falls	4	.....	Yellowstone Park	5	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Note.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.
Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist at high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.
As far as practicable all reports of snow and ice are printed in the table.

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SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief

No. 7

WASHINGTON, D. C., JANUARY 29, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED JANUARY 27

The week was again notable for the high barometric pressure in the far Northwest, for persistent cold over much of the country, and for the absence of important precipitation over central and western districts.

The week opened with low temperatures in the Plateau region and thence eastward to the Great Plains, these extending during the following day into the middle Mississippi Valley, then at the morning observation of Wednesday extending into the west Gulf States, the line of 20° passing into southern Texas, with a minimum of 28° at Brownsville. This cold area diminished somewhat in severity as it moved eastward, and fair and cold weather prevailed over much of the country thereafter till near the end of the week, when cloudy and unsettled weather set in over the eastern districts, continuing until the close, and some precipitation occurred in the mountain regions of the West.

The average temperature for the week ranged from 15° to 30° below normal from the far Northwest southeastward to the Ohio Valley and portions of the Great Lakes. It was only slightly less cold in most other parts, save southern Florida, portions of the upper Missouri Valley, and the central and southern coast districts of California where the weekly means of temperature were slightly higher than normal.

Precipitation was confined mostly to the region from eastern Texas northeastward to the middle Atlantic coast, with a few localities having amounts in excess of 2 inches in the lower Mississippi Valley and near-by areas.

DEPTH OF SNOW ON GROUND

Snow occurred on several dates over the eastern districts, but little occurred in the West, save in some of the central and northern portions of the Rocky Mountains.

Appreciable amounts were measured at points in the Great Lakes region and thence eastward, though the amounts remaining on the ground were not materially greater than reported at the end of the preceding week.

Considerable snow disappeared during the week from the mountains of Oregon, Idaho, and California and small amounts disappeared over the more southern areas from the Rocky Mountains eastward to the lower Ohio Valley.

Not much change occurred from the conditions existing a week ago, save small areas in Texas and Oklahoma, covered then, are now bare, and the southern limit of the snow-covered area in the districts east of the Mississippi River has retreated slightly to the northward.

Depths of accumulated snow in the elevated regions of the western mountains are probably near the normal in the Rocky Mountains and portions of the northern Plateau, but in the Sierra and near-by mountains the amounts are distinctly less than are usually stored by the end of January.

ICE IN RIVERS AND HARBORS

The general cold existing through most of the week caused moderate increases in the amounts of ice on the various rivers and lakes in northern districts, though the areas having appreciable ice did not materially increase. The depths on the Missouri increased about 2 inches throughout, but in the Mississippi the increases ranged up to as much as 7 inches.

Some ice formed in the main stream of the Ohio, and the amounts of ice on the rivers of the Atlantic from the Potomac northward increased considerably. The harbors of the Great Lakes continued heavily coated in the northern areas.

Ice of sufficient thickness to harvest is now available in many ponds and streams of the Northeastern States.

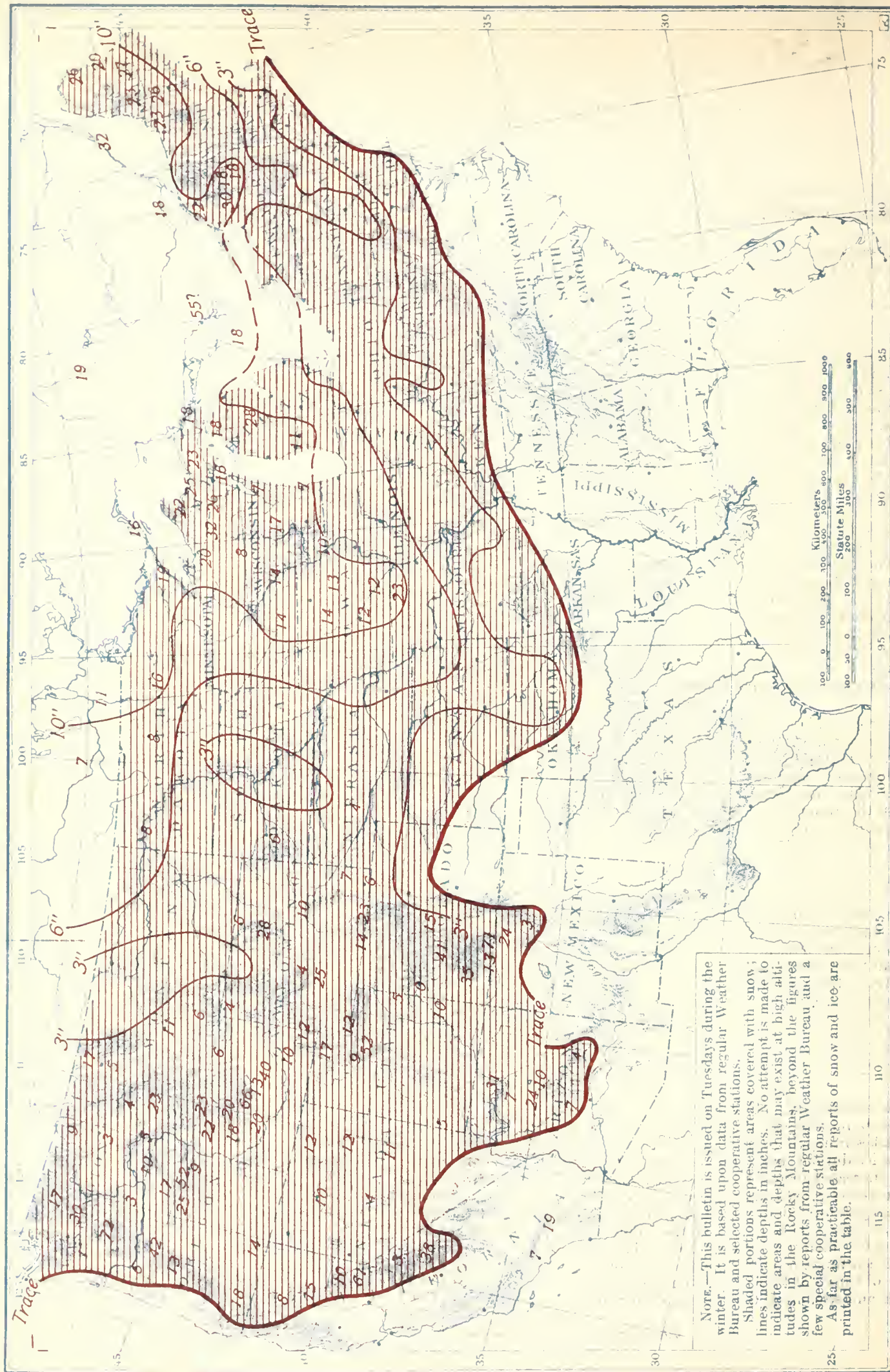
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., JANUARY 27, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Arizona</i>	<i>Inches</i>	<i>Inches</i>	<i>Nebraska</i>	<i>Inches</i>	<i>Inches</i>
Bright Angel	31	.....	Auburn	6	.....
Flagstaff	10	.....	Lodgepole	3	.....
<i>California</i>			Norfolk	6	.....
Huntington Lake	38	.....	Valentine	1	.....
Norden	61	.....	<i>Nevada</i>		
Squirrel Inn	19	.....	Arthur	12	.....
<i>Colorado</i>			Kimberly	11	.....
Crested Butte	41	.....	<i>New Hampshire</i>		
Durango	13	.....	Hanover	9	.....
<i>Idaho</i>			Pittsburg	23	.....
Big Creek	23	.....	<i>New Jersey</i>		
Boise	9	.....	Cape May	1	.....
Kellogg	4	.....	Newton	4	.....
Lewiston	5	*†	Trenton	1	4.0
Mackay	3	.....	<i>New York</i>		
Soldier Creek	10	.....	Delhi	6	.....
Vienna Mine	66	.....	Herkimer	6	.....
<i>Illinois</i>			Ithaca	3	.....
Cairo	1	†	New York	1	0.0
Chicago	3	.....	Old Forge	16	.....
Griggsville	5	.....	Rochester	2	3.0
Salem	4	.....	<i>North Dakota</i>		
<i>Indiana</i>			Bismarck	5	25.5
Cambridge City	6	.....	Devils Lake	8	.....
Evansville	1	0.0	<i>Ohio</i>		
Royal Center	2	.....	Beverly	2	.....
Shoals	3	.....	Cincinnati	1	†
<i>Iowa</i>			Cleveland	3	5.5
Atlantic	8	.....	Tiffin	5	.....
Charles City	11	.....	<i>Oklahoma</i>		
Davenport	8	12.0	Broken Arrow	4	.....
Forest City	11	.....	Oklahoma City	5	.....
Sioux City	4	23.0	<i>Oregon</i>		
Waterloo	13	.....	Baker	9	.....
<i>Kansas</i>			Fish Lake	18	.....
Iola	4	11.0	Olive Lake	25	.....
Medicine Lodge	2	.....	<i>Pennsylvania</i>		
<i>Maine</i>			Harrisburg	7	5.5
Oldtown	10	.....	Huntingdon	3	.....
Portland	8	0.0	Philadelphia	1	†
Van Buren	26	.....	Pittsburgh	3	0.0
<i>Massachusetts</i>			Towanda	6	.....
Boston	1	0.0	Warren	4	.....
Holyoke	2	8.0	<i>Rhode Island</i>		
Williamstown	5	.....	Kingston	3	.....
<i>Michigan</i>			Providence	3	0.0
Alpena	7	18.0	<i>South Dakota</i>		
Coldwater	6	.....	Huron	5	21.5
East Jordan	16	.....	Rapid City	6	.....
Iron Mountain	16	.....	<i>Utah</i>		
Ludington	6	.....	Moab	10	.....
Munising	23	.....	Ogden	24	.....
Port Huron	8	8.5	<i>Vermont</i>		
<i>Minnesota</i>			Brattleboro	7	9.0
Duluth	9	24.0	Burlington	5	*
Mankato	14	.....	<i>Washington</i>		
Moorhead	5	25.0	Berne	30	.....
Mora	7	.....	Spokane	3	.....
Thief River Falls	16	.....	Sullivan Lake	9	.....
<i>Missouri</i>			<i>West Virginia</i>		
Brunswick	12	.....	Clarksburg	3	.....
Clinton	4	.....	Wheeling	1	.....
Hannibal	6	9.5	<i>Wisconsin</i>		
Kansas City	8	9.0	Brodhead	8	.....
Mountain Grove	2	.....	Eau Claire	14	.....
<i>Montana</i>			Wausau	9	22.5
Belton	17	.....	<i>Wyoming</i>		
Bozeman	6	.....	Cheyenne	6	.....
Grant	6	.....	Sheridan	6	.....
Havre	2	.....	South Pass City	25	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., January 27, 1930



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 8

WASHINGTON, D. C., FEBRUARY 5, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED FEBRUARY 3

At the beginning cloudy, rainy weather prevailed over most districts from Texas northeastward to New England, with cold weather approaching this area from the west. During the following day precipitation continued very generally over the Gulf and South Atlantic States, the rain turning to snow and becoming heavy on Thursday over the interior portions of the Carolinas and to northward, snow continuing heavy in part of the middle Atlantic area, but changing to glaze or sleet near the coast. This snow became markedly less to the northward of the District of Columbia where the total fall approximated 10 inches or more, and it diminished rapidly to the southward also.

The middle part of the week had some precipitation in the Northwest and near the northern border, and by the end a precipitation area was passing eastward from the Lake region to New England, and a second storm was advancing eastward over Texas, with prospects of precipitation in the districts to the eastward and northeastward. The weather of the week, as a whole, was markedly warmer than the two preceding weeks, at least in the upper Mississippi Valley and thence westward; but in other parts the average temperatures were not materially different from the normal, though over southern districts from Texas eastward they were mainly cooler than normal. Minimum temperatures were not unseasonably low, areas with minimum readings below zero being confined chiefly to the region from eastern Montana and Wyoming to the upper Lakes and over the northern portion of New York and New England. Freezing temperatures, however, occurred to the coasts of Alabama and western Florida.

Important precipitation occurred from the eastern parts of Texas and Oklahoma to near the Atlantic coast, and there was local heavy precipitation in the far Northwest. In the middle and southern Plateau and thence eastward and northeastward to the Great Plains there was little precipitation, and there was comparatively little over the upper Mississippi and Ohio Valleys.

DEPTH OF SNOW ON GROUND

Little of the heavy snow that occurred on the night of January 29 and on the 30th over the districts from the Carolinas northeastward to southern New York remained unmelted at the close of the week, and important reductions in the snow depths reported a week ago occurred over the greater part of the country. The decreases ranged up to 10 inches or more in some of the western mountain districts, while from the middle Plains eastward the decreases ranged up to 5 inches or more.

Over the more northern districts from the Great Lakes eastward there were some increases over the amounts reported last week, but usually these were not large.

ICE IN RIVERS AND HARBORS

Moderately cold weather favored the formation of some additional ice over the central and northern rivers and lakes, but over most southern districts, where ice formed during the two preceding weeks, the new ice largely disappeared and those streams are now open.

Ice harvesting and lumbering operations in New England are proceeding under favorable conditions.

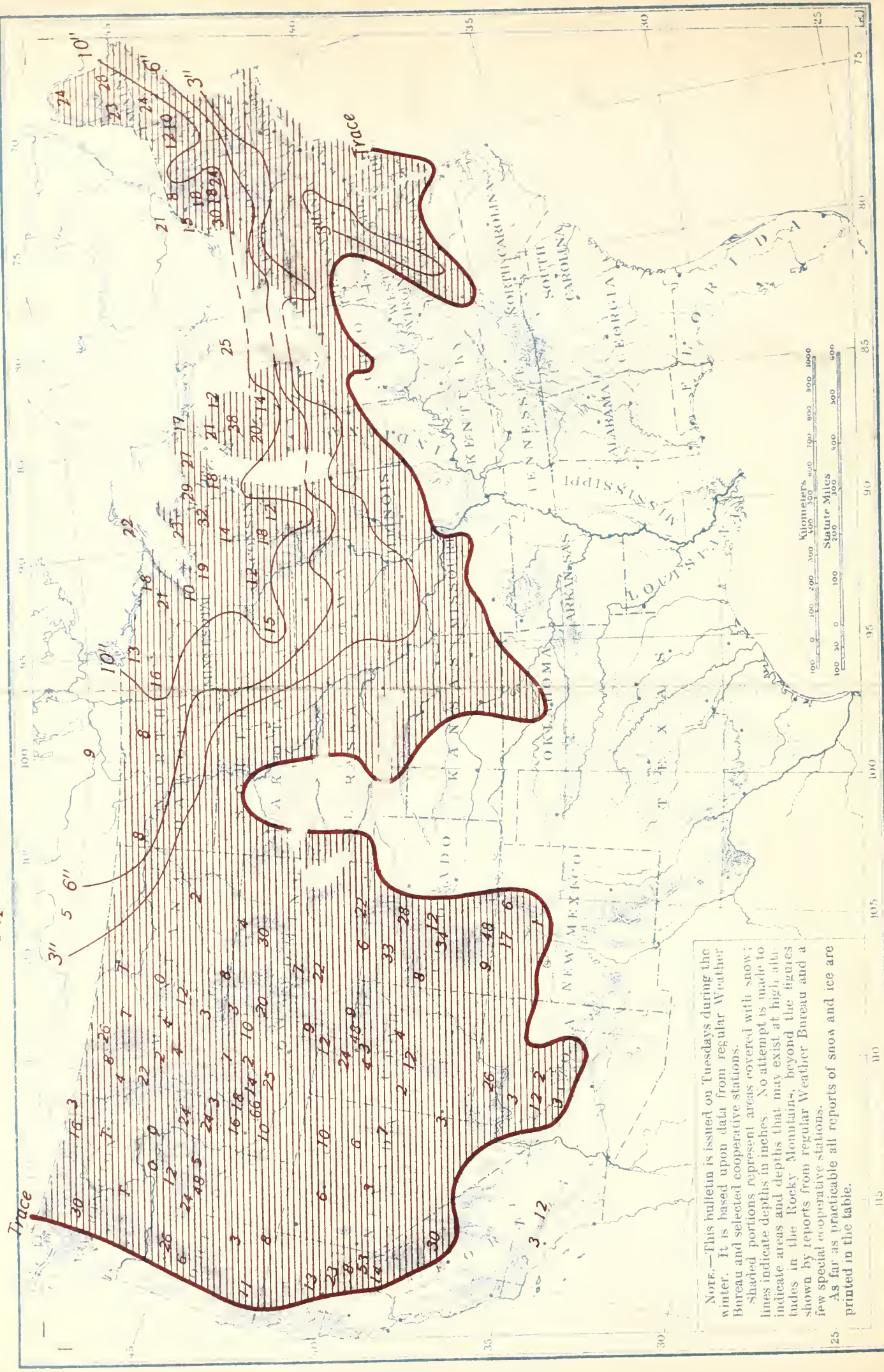
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 3, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Nevada</i>	<i>Inches</i>	<i>Inches</i>
Barrow.....	13	.....	Austin.....	3	.....
Cordova.....	28	.....	McGill.....	7	.....
Fort Yukon.....	12	.....	North Fork.....	10	.....
<i>Arizona</i>			Winnemucca.....	6	.....
Grand Canyon.....	3	.....	<i>New Hampshire</i>		
Williams.....	12	.....	Berlin.....	10	.....
<i>California</i>			Concord.....	10	18.0
Inskip.....	23	.....	Keene.....	6	.....
Mount Wilson.....	3	.....	<i>New Mexico</i>		
Norden.....	53	.....	Chama.....	17	.....
<i>Colorado</i>			Elizabethtown.....	6	.....
Cumbres.....	48	.....	<i>New York</i>		
Leadville.....	12	.....	Albany.....	3	9.5
Steamboat Springs.....	33	.....	Alfred.....	3	.....
<i>Idaho</i>			Buffalo.....	7	7.0
McCall.....	24	.....	Canton.....	8	.....
Mascot Mine.....	35	.....	Jamestown.....	4	.....
Porthill.....	3	.....	Malone.....	8	.....
Shake Creek.....	10	.....	Oswego.....	11	10.5
<i>Illinois</i>			Plattsburg.....	9	.....
Chicago.....	2	.....	Poughkeepsie.....	1	.....
Monmouth.....	5	.....	Saranac Lake.....	10	.....
Waukegan.....	3	.....	<i>North Dakota</i>		
<i>Indiana</i>			Ellendale.....	2	.....
Angola.....	4	.....	Williston.....	8	31.0
Collegeville.....	1	.....	<i>Ohio</i>		
<i>Iowa</i>			Sandusky.....	0	12.0
Albia.....	3	.....	Wauseon.....	2	.....
Des Moines.....	2	16.0	<i>Oregon</i>		
Dubuque.....	4	18.5	Austin.....	30	.....
Estherville.....	5	.....	Government Camp.....	26	.....
Keokuk.....	2	14.0	Meacham.....	12	.....
Marshalltown.....	5	.....	Silver Lake.....	3	.....
<i>Maine</i>			<i>Pennsylvania</i>		
Gardiner.....	11	15.0	Erie.....	T.	8.0
Greenville.....	23	21.0	Franklin.....	3	.....
Millinocket.....	28	.....	Freeland.....	5	.....
<i>Massachusetts</i>			Holtwood.....	4	.....
Amherst.....	1	.....	Midflintown.....	4	.....
Concord.....	2	.....	<i>South Dakota</i>		
<i>Michigan</i>			Huron.....	T.	21.5
Benzonia.....	13	.....	Pierre.....	0	27.5
Detroit.....	2	7.0	<i>Utah</i>		
Escanaba.....	18	22.0	Deseret.....	2	.....
Grand Haven.....	7	.....	Logan.....	12	.....
Iron River.....	32	.....	Modena.....	3	.....
Munising.....	27	.....	Price.....	4	.....
Sault Ste. Marie.....	17	17.0	Watson.....	5	.....
<i>Minnesota</i>			<i>Vermont</i>		
Campbell.....	4	.....	Burlington.....	5	9.5
Duluth.....	10	24.5	Northfield.....	9	.....
Leech Lake Dam.....	10	.....	St. Johnsbury.....	12	.....
Minneapolis.....	6	.....	White River Junction.....	7	.....
Roseau.....	9	.....	<i>Virginia</i>		
Virginia.....	21	.....	Buchanan.....	4	.....
<i>Missouri</i>			Dale Enterprise.....	3	.....
Maryville.....	3	.....	Fredericksburg.....	1	.....
St. Joseph.....	1	.....	<i>Wisconsin</i>		
St. Louis.....	0	†	Fond du Lac.....	12	.....
Unionville.....	10	.....	Green Bay.....	7	10.0
<i>Montana</i>			La Crosse.....	6	18.0
Haugan.....	22	.....	Madison.....	6	.....
Kalispell.....	8	.....	Medford.....	7	.....
Loweth.....	12	.....	Milwaukee.....	5	.....
Miles City.....	2	.....	Stevens Point.....	18	.....
Missoula.....	2	.....	<i>Wyoming</i>		
Red Lodge.....	8	.....	Alta.....	20	.....
<i>Nebraska</i>			Evanston.....	9	.....
Lodgepole.....	1	.....	Lander.....	2	.....
O'Neill.....	2	.....	Yellowstone Park.....	3	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 3, 1930



Note.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist at high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 9

WASHINGTON, D. C., FEBRUARY 12, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED FEBRUARY 10

Moderate temperatures prevailed in most sections, there was little important precipitation, and only small amounts of snow occurred.

At the beginning of the week a cyclonic storm of moderate force was central in the lower Mississippi Valley and precipitation covered many of the Gulf States and near-by areas, and there was general precipitation in the far Northwest. By the following day the eastern storm had advanced rapidly to the coast of southern New England, the general precipitation had extended to the Atlantic coast and changed to snow over the more northern districts, and light rain or snow continued in the far Northwest, though in diminished area.

The latter part of the week was mostly without precipitation in the central and eastern districts save for some light snow along the northern border from the Great Lakes eastward, particularly on Monday when rain or snow covered a considerable area from the southern drainage of the Ohio northward and northeastward to the Great Lakes and portions of New England. In the far Northwest some rain or snow occurred toward the end of the week, though precipitation had generally ceased by the end, save along the immediate Pacific coast.

The week, as a whole, was a warm one for midwinter, though decided cold prevailed about the middle of the week in the Northeast, the minimum temperatures falling to 30° below zero in northern New York, while, further northward in Canada, Doucet, Quebec, reported a minimum of 52° below zero. West of the Great Lakes no temperatures below zero were recorded, and readings below freezing did not occur in many parts of the Gulf States or at the lower elevations of the Pacific Coast States.

Precipitation was mostly light, save along or near the Atlantic coast and in the far Northwest, and little or none occurred in the southern districts from the middle Gulf States westward or in the Great Plains or Rocky Mountain districts.

DEPTH OF SNOW ON GROUND

There was practically no snowfall during the week in the districts from the Mississippi Valley westward, the deficiency being marked in the western mountain districts, where, at this season of the winter, the falls are frequently heavy. From the upper Lakes eastward and southeastward to near the Atlantic coast there was more or less snow, but only in a few localities, mostly in the northern portions of New York and New England, were the combined falls for the week more than a few inches.

The area now snow-covered is materially less than was reported last week, nearly the entire winter wheat area now being bare or with only a light covering of snow, and large areas at the lower elevations of the western mountains have been uncovered during the week.

Some important increases occurred in the depth of the snow cover in Alaska, particularly in the Southeast where the gains ranged up to as much as 14 inches.

ICE IN RIVERS AND HARBORS

Over extreme northern districts from the Dakotas eastward there were some increases of ice thickness, particularly in Lake Superior and in the northern districts of New York and New England, but elsewhere there were more or less decreases, and considerable amounts disappeared from the more southern streams and ponds where it had previously accumulated.

The ice harvest is reported as having begun in portions of New York where commercial amounts are usually harvested, but the quality is reported as only fair. Farther north in New England ice up to 14 inches in thickness is being harvested.

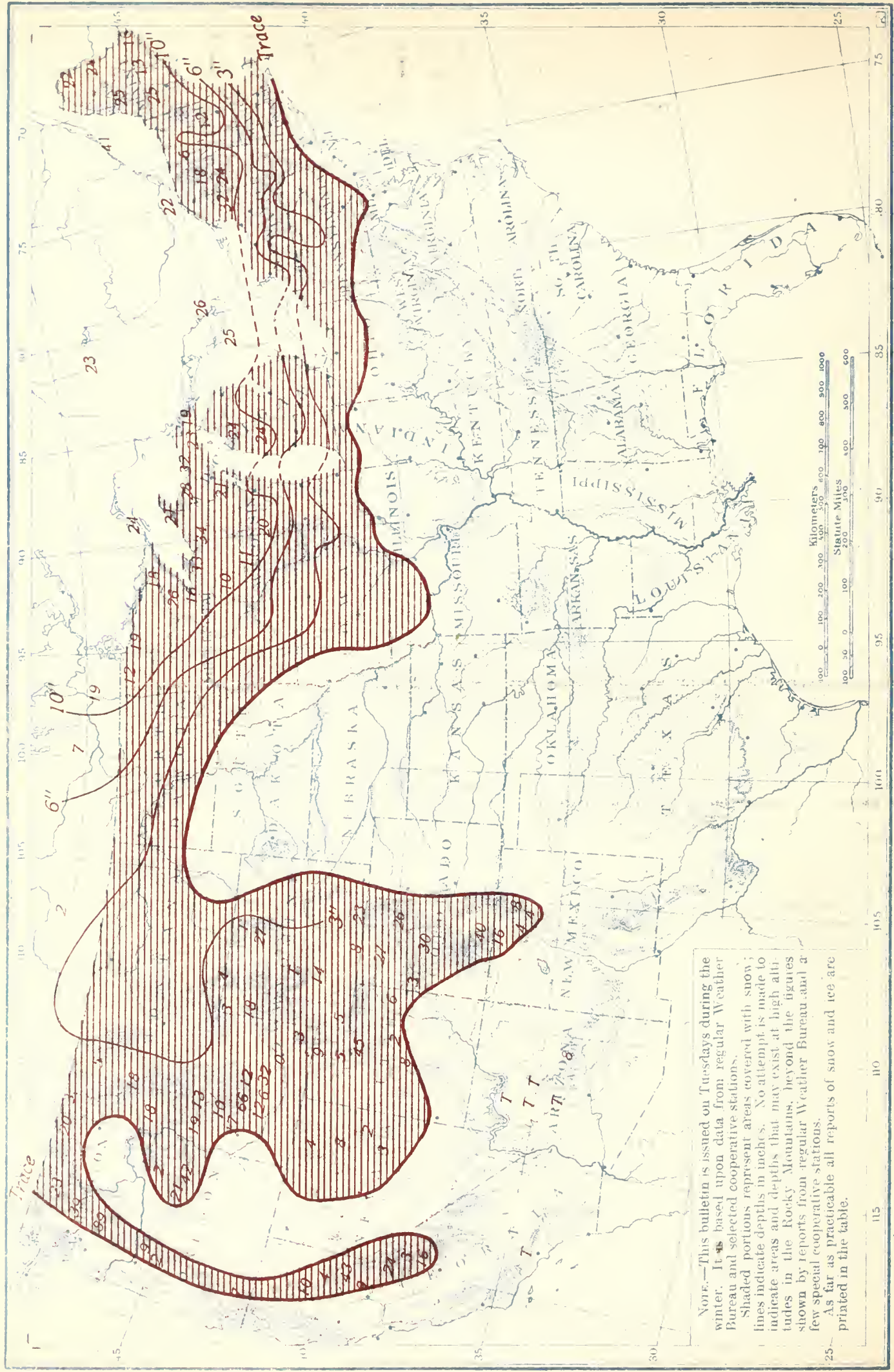
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 10, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>New Hampshire</i>	<i>Inches</i>	<i>Inches</i>
Cordova	42	.....	Concord	11	18.0
Eagle	14	.....	Hanover	12	.....
Juneau	8	.....	Pittsburg	28	.....
<i>California</i>			<i>New Jersey</i>		
Huntington Lake	16	.....	Newton	2	.....
Macumber	10	.....	Trenton	0	†
Norden	43	.....	<i>New Mexico</i>		
Sierraville	4	.....	Aurora	8	.....
<i>Colorado</i>			Chacon	4	.....
Cumbres	40	.....	Truchas	4	.....
Dillon	26	.....	<i>New York</i>		
Grand Junction	3	.....	Albany	4	12.0
Steamboat Springs ...	27	.....	Beaver River	24	.....
<i>Idaho</i>			Dansville	1	.....
Hailey	6	.....	Ithaca	3	.....
Montpelier	3	.....	Jeffersonville	6	.....
Pierce City	18	.....	Lake Placid	16	.....
Vienna Mine	66	.....	Old Forge	21	.....
<i>Illinois</i>			Rochester	5	8.0
Freeport	4	.....	Rome	8	.....
Peoria	T.	6.0	Syracuse	4	.....
<i>Iowa</i>			<i>North Dakota</i>		
Charles City	5	.....	Bismarck	1	29.0
Davenport	T.	12.5	Devils Lake	6	.....
Dubuque	1	15.5	Williston	4	28.0
Forest City	4	.....	<i>Ohio</i>		
Iowa City	1	.....	Cleveland	1	3.5
Keokuk	T.	10.5	Millersburg	1	.....
<i>Maine</i>			Toledo	T.	10.0
Eastport	16	0.0	<i>Oregon</i>		
Farmington	25	.....	Fish Lake	7	.....
Gardiner	15	18.0	Imperial Mine	42	.....
Greenville	25	22.0	Olive Lake	21	.....
Houlton	24	.....	Wallowa	1	.....
Portland	9	0.0	Welches	2	.....
<i>Massachusetts</i>			<i>Pennsylvania</i>		
Holyoke	4	8.5	Bellefonte	3	.....
Williamstown	6	.....	Emporium	1	.....
<i>Michigan</i>			Harrisburg	T.	7.0
Alpena	11	18.0	Warren	4	.....
Battle Creek	5	.....	<i>South Dakota</i>		
East Tawas	7	.....	Huron	0	20.0
Grand Rapids	6	.....	Yankton	0	‡
Houghton	21	19.0	<i>Utah</i>		
Ironwood	33	.....	Manti	8	.....
Lansing	7	.....	Ogden	5	.....
Marquette	28	10.0	Silver Lake	45	.....
Mount Pleasant	7	.....	<i>Vermont</i>		
Newberry	23	.....	Brattleboro	8	14.0
Port Huron	6	18.0	Burlington	6	12.0
Saginaw	8	.....	Rutland	4	.....
<i>Minnesota</i>			<i>Washington</i>		
Baudette	19	.....	Berne	39	.....
Duluth	14	25.0	Paradise Inn	89	.....
Ely	18	.....	Sullivan Lake	20	.....
Fort Ripley	6	.....	Twisp	23	.....
Grand Meadow	5	.....	<i>Wisconsin</i>		
Moorhead	4	29.0	Ashland	26	.....
St. Paul	5	*	Green Bay	8	12.0
<i>Missouri</i>			La Crosse	4	18.0
Brunswick	2	.....	Milwaukee	3	.....
Hannibal	T.	8.0	Spooner	10	.....
<i>Montana</i>			Wausau	8	22.0
Bozeman	1	.....	<i>Wyoming</i>		
Haugan	18	.....	Casper	1	.....
Kalispell	5	.....	Dixon	8	.....
<i>Nevada</i>			Dome Lake	27	.....
Arthur	8	.....	Foxpark	23	.....
Kimberly	3	.....	Sheridan	1	.....
North Fork	4	.....	South Pass City	14	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 10, 1930



Note.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist at high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 10

WASHINGTON, D. C., FEBRUARY 19, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED FEBRUARY 17

The week was marked by rapid changes of temperature and by some low readings over the more eastern and northern sections, and the absence of important snows, especially in the western mountains. The week opened with light precipitation in the far Northwest, followed by scattered snows along the northern border until near the middle of the week, when precipitation became more general over the northern border and had extended southward into portions of the mountain districts of the West and into the middle Mississippi and Ohio Valleys. By the 13th precipitation had continued to some extent along the northern border, and the area with precipitation over the Gulf had moved northeastward to the coast of New England.

On the morning of the 15th snow was falling over the Ohio Valley and near-by areas to the north, east, and south. During the following 24 hours rain and snow overspread most districts from the middle Gulf and south Atlantic coasts northeastward to New England, the center of the storm area having passed to and beyond the New England coast in the preceding 24 hours, with greatly increased intensity, and continuing northeastward, so that at the close of the week the weather had cleared in most districts.

DEPTH OF SNOW ON GROUND

No snow fell during the week over the Great Plains and northwestward to central Montana, and little fell elsewhere in the West. The deficiencies were rather marked in the western mountain districts, where heavy falls usually occur at this season of the winter. However, in some of the higher elevations considerable snowfall occurred, especially in portions of northern Colorado and southern Wyoming.

In the Lake region the deficiencies were general, while in the upper Mississippi Valley and in the East the falls were heavy in some sections, especially in portions of the Virginias and southern Pennsylvania and thence northeastward over the southern portions of New England, where most of the snow fell on the 15th and 16th.

The area covered with snow at the close of the week is somewhat greater than on the 10th from Indiana eastward, particularly in the Appalachian Mountain region and the States of the Atlantic coast. Over southeastern New Jersey, Long Island, and the southeastern portions of New England a cover of from 2 to 10 inches is now reported, most of this region being more deeply covered than at any previous time this season. Between the Mississippi River and the foothills of the Rocky Mountains a considerable area was freed from snow, especially in Montana, while to westward of the Divide there was some decrease of the snow-covered area, notably in Utah and Nevada.

ICE IN RIVERS AND HARBORS

With comparatively cold weather in the eastern portion of the country, but decidedly mild weather for the time of year in the States to westward of the Mississippi River during the week, there was generally an increase of the ice thickness in the Lake region and to eastward, particularly in the New England States, while in the Mississippi Valley and to westward decreases were general and in some localities rather marked. In Iowa and Montana much of the ice in streams is getting rotten, and the ice is moving in the Platte River in Nebraska. Considerable ice is reported in the courses of the Hudson and Mohawk Rivers, but streams tributary to the upper Ohio River have now but comparatively little ice.

The ice harvest is reported completed in Minnesota, with an excellent yield.

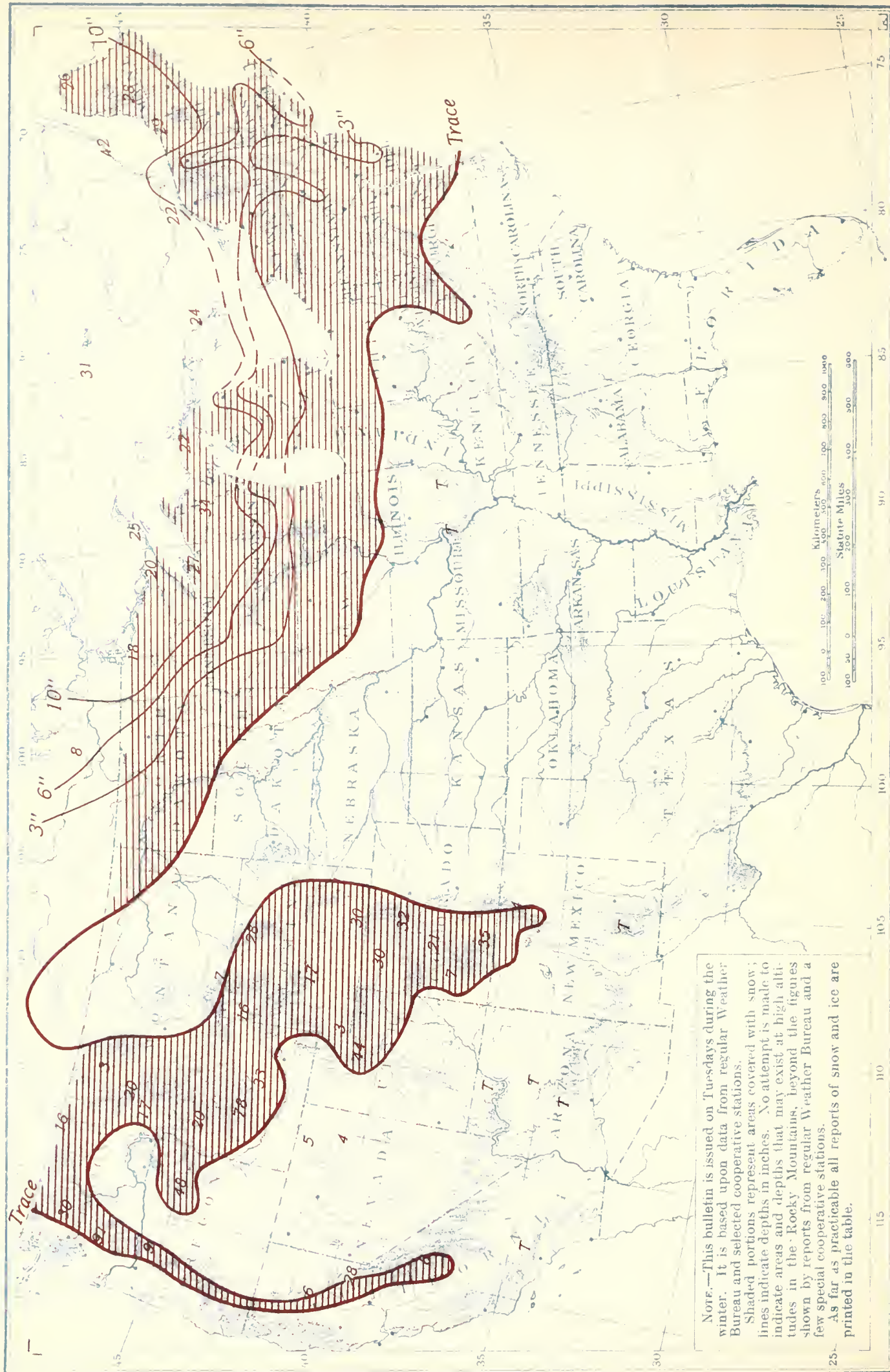
P. C. DAY,
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 17, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>California</i>	<i>Inches</i>	<i>Inches</i>	<i>New Hampshire</i>	<i>Inches</i>	<i>Inches</i>
Huntington Lake	8	.....	Berlin	16	.....
Macumber	6	.....	Keene	7	.....
Norden	28	.....	Pittsburg	29	.....
Yosemite	3	.....	<i>New Jersey</i>		
<i>Colorado</i>			Atlantic City	2	.....
Crested Butte	21	.....	Elizabeth	5	.....
Cumbres	35	.....	Lakewood	2	.....
Leadville	6	.....	Newton	4	.....
Rico	7	.....	<i>New York</i>		
<i>Connecticut</i>			Buffalo	2	10.0
Hartford	3	8.0	Cutchogue	10	.....
New Haven	3	0.0	Fredonia	2	.....
<i>Delaware</i>			Lowville	30	.....
Millsboro	2	.....	New York	2	0.0
Wilmington	T.	.....	Norwich	6	.....
<i>Idaho</i>			Ogdensburg	7	.....
Idaho City	12	.....	Oswego	9	14.0
Ketchum	11	.....	<i>North Dakota</i>		
Kirkham	7	.....	Bismarck	1	30.0
McCall	20	.....	Williston	2	27.0
Mascot Mine	33	.....	<i>Ohio</i>		
Vienna Mine	78	.....	Charlestown	1	.....
<i>Illinois</i>			Sandusky	0	11.5
La Salle	1	.....	<i>Oregon</i>		
Peoria	T.	4.0	Government Camp	9	.....
<i>Indiana</i>			Imperial Mine	48	.....
Cambridge City	1	.....	<i>Pennsylvania</i>		
Marion	1	.....	Allentown	2	.....
Notre Dame	1	.....	Confluence	1	.....
<i>Iowa</i>			Erie	T.	12.0
Davenport	T.	10.0	Gettysburg	1	.....
Des Moines	T.	8.0	Johnstown	2	.....
Estherville	1	.....	Philadelphia	1	†
Iowa Falls	2	.....	Reading	2	*
Sioux City	0	?	Scranton	1	.....
<i>Maine</i>			Warren	3	.....
Greenville	28	23.0	<i>Rhode Island</i>		
Oldtown	13	.....	Kingston	10	.....
Portland	5	0.0	Providence	5	0.0
Van Buren	26	.....	<i>South Dakota</i>		
<i>Maryland</i>			Huron	0	19.0
Baltimore	1	0.0	Pierre	0	23.0
Easton	1	.....	<i>Vermont</i>		
<i>Massachusetts</i>			Bellows Falls	4	.....
Boston	5	0.0	Brattleboro	6	16.0
Nantucket	6	0.5	Northfield	8	.....
<i>Michigan</i>			White River Junction	8	.....
Alpena	9	21.0	<i>Virginia</i>		
Bad Axe	1	.....	Dale Enterprise	1	.....
Cadillac	21	.....	Woodstock	1	.....
Cassopolis	2	.....	<i>Washington</i>		
Detroit	T.	8.0	Paradise Inn	91	.....
Escanaba	18	22.0	Sullivan Lake	16	.....
Grand Haven	2	.....	<i>West Virginia</i>		
Ludington	4	.....	Bayard	4	.....
Mackinaw	17	.....	Camden-on-Gauley	4	.....
Sault Ste. Marie	19	21.0	Charleston	1	.....
<i>Minnesota</i>			Elkins	2	0.0
Collegeville	7	.....	Fairmont	1	.....
Duluth	13	28.0	<i>Wisconsin</i>		
Mankato	4	.....	Ashland	27	.....
Montevideo	2	.....	Madison	1	.....
Mora	7	.....	Park Falls	16	.....
St. Paul	5	7.0	Wausau	6	23.5
Thief River Falls	20	.....	<i>Wyoming</i>		
Virginia	28	.....	Alta	16	.....
<i>Montana</i>			Dome Lake	28	.....
Grant	2	.....	Evanston	3	.....
Haugan	20	.....	Foxpark	30	.....
Red Lodge	7	.....	Yellowstone Park	3	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 17, 1930



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 11

WASHINGTON, D. C., FEBRUARY 26, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED FEBRUARY 24

Unusually warm weather prevailed during the greater portion of the week over most sections and very little snow fell.

The week opened with fair weather in most districts; however, a low area was moving eastward in the Northwest, with precipitation only in a few scattered districts, and some light snow flurries were reported from the St. Lawrence Valley. On the morning of the 19th moderate to rather heavy precipitation was reported in the North Pacific States, and by the next day this had extended throughout the Pacific States and into portions of Nevada and Idaho. Meanwhile, the other portions of the country were marked by almost complete absence of precipitation. Moderate to light precipitation continued throughout the Pacific States during the remainder of the week, and extended over nearly all the Plateau region and portions of the Rocky Mountain region.

The high pressure that prevailed generally throughout the southern portion of the country from the Rocky Mountains eastward at the beginning of the week continued for several days, but toward the latter part of the week was replaced by generally low pressure, which was accompanied by moderate precipitation over much of the country, almost wholly rain, with numerous thunderstorms.

The highest temperatures ever recorded during February at numerous places from western North Carolina to the Missouri and upper Mississippi Valleys were noted during the week, chiefly near the end.

DEPTH OF SNOW ON GROUND

There was practically no snowfall during the week east of the Rocky Mountain Divide, except at the very close over much of North Dakota and in the foothills from Wyoming southward. Along the Divide and to westward most elevated areas reported small to moderate falls, but a few points in the Pacific States reported heavy falls.

The area now covered with snow is materially less than was reported last week. Between the Ohio River and the Atlantic coast the northward retreat of the snow limit was about 400 miles. East of the Rocky Mountains only northern New England, northeastern New York, and a comparatively small portion of the upper Lake region, with North Dakota and northern Minnesota, now have a cover.

At the lower elevations of the western mountains very little snow is now to be found, but some higher elevations which were bare last week now have a slight cover, and most portions of the West which were covered last week continue covered, usually with an increase in depth.

ICE IN RIVERS AND HARBORS

Owing to the warm weather that prevailed throughout the week, there was a decrease in the ice thickness in almost all districts. In many instances where there was heavy ice a week ago, the rivers are now clear or mere fragments of ice are floating therein. In Montana the run-off from melting snow caused breaking up of ice in many streams, with considerable jamming and consequent flooding of lowlands and a few valley towns.

Most of the Connecticut River is still ice-bound. Many harbors of the lower Lakes were completely freed during the week, and a few of the upper Lakes, but St. Marys River still has thick ice.

In most portions of south-central New York a satisfactory harvest of good quality was secured before the warm weather set in to soften the ice.

M. C. BENNETT,

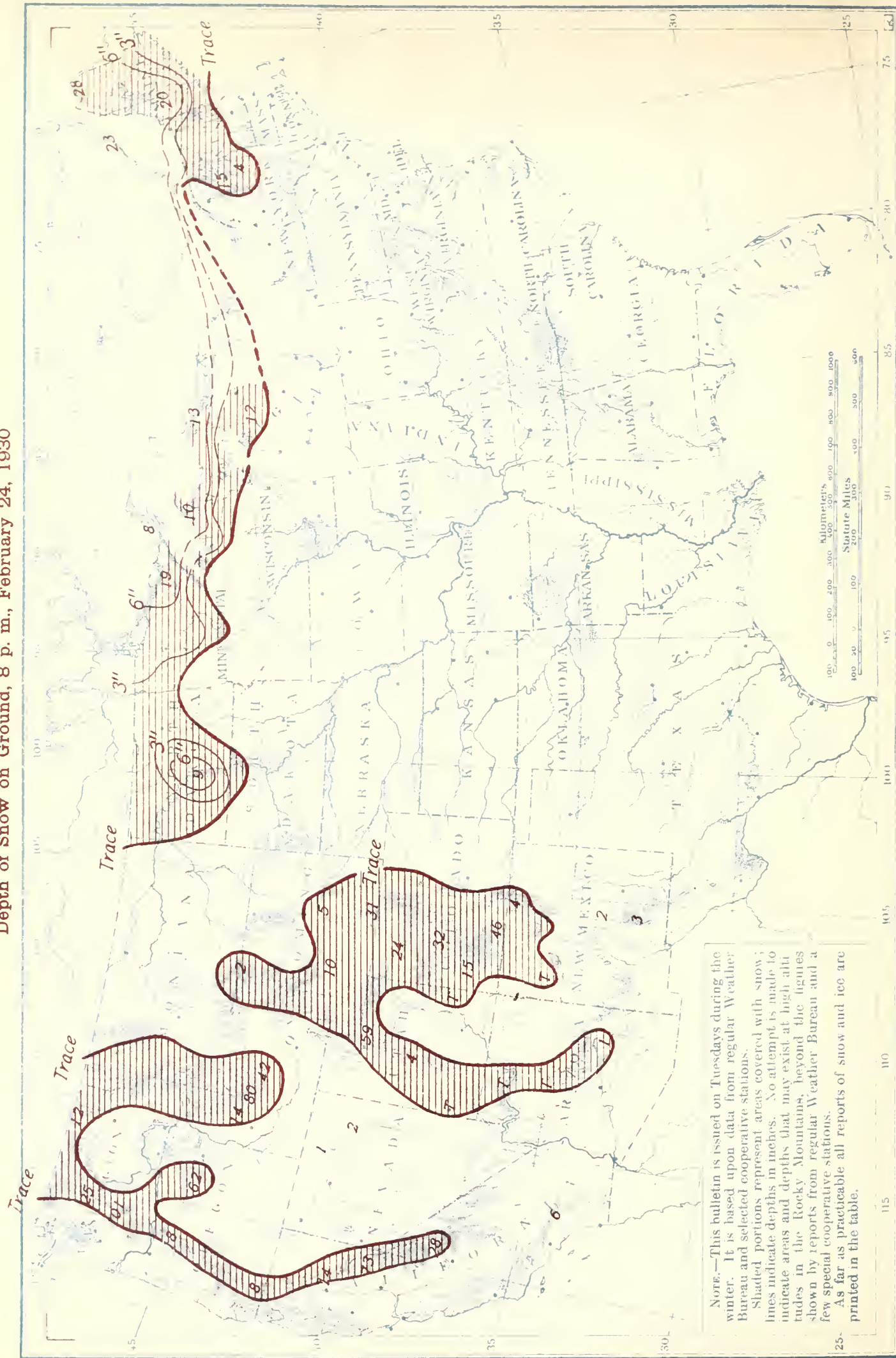
Temporarily in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., FEBRUARY 24, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Nevada</i>	<i>Inches</i>	<i>Inches</i>
Barrow.....	12	.....	Arthur.....	2	.....
Bethel.....	4	.....	Austin.....	T.	.....
Cordova.....	48	.....	North Fork.....	1	.....
Eagle.....	17	.....	<i>New Hampshire</i>		
Fort Yukon.....	12	.....	Berlin.....	3	.....
Juneau.....	18	.....	Concord.....	0	14.0
Nome.....	42	.....	Hanover.....	2	.....
Tanana.....	16	.....	Lancaster.....	1	.....
<i>Arizona</i>			<i>New Mexico</i>		
Bright Angel.....	T.	.....	Chama.....	14	.....
Flagstaff.....	T.	.....	Cloudcroft.....	3	.....
Fort Apache.....	1	.....	Corona.....	2	.....
Prescott.....	T.	.....	Elizabethtown.....	4	.....
<i>California</i>			Gamercio.....	T.	.....
Big Creek.....	3	.....	Santa Fe.....	1	.....
Blue Canyon.....	12	.....	Taos.....	1	.....
Huntington Lake.....	28	.....	<i>New York</i>		
Macomber.....	14	.....	Beaver River.....	15	.....
McCloud.....	7	.....	Buffalo.....	0	7.0
Mount Wilson.....	T.	.....	Corinth.....	4	.....
Norden.....	73	.....	Northville.....	4	.....
Sierraville.....	4	.....	Old Forge.....	14	.....
Squirrel Inn.....	6	.....	<i>North Dakota</i>		
<i>Colorado</i>			Bismarck.....	9	27.0
Crested Butte.....	32	.....	Devils Lake.....	2	.....
Cumbres.....	46	.....	Williston.....	T.	?
Denver.....	1	.....	<i>Oregon</i>		
Leadville.....	3	.....	Detroit.....	2	.....
Rico.....	15	.....	Fish Lake.....	8	.....
Steamboat Springs.....	24	.....	Government Camp.....	18	.....
<i>Idaho</i>			Imperial Mine.....	62	.....
Hailey.....	10	.....	Lakeview.....	2	.....
Idaho City.....	14	.....	Meacham.....	5	.....
Ketchum.....	16	.....	Olive Lake.....	26	.....
Kirkham.....	8	.....	Siskiyou.....	4	.....
Mascot Mine.....	42	.....	<i>Pennsylvania</i>		
Porthill.....	2	.....	Erie.....	0	*
Shake Creek.....	14	.....	Harrisburg.....	0	†
Soldier Creek.....	18	.....	<i>South Dakota</i>		
Vienna Mine.....	80	.....	Huron.....	0	8.0
<i>Maine</i>			Pierre.....	0	†
Farmington.....	20	.....	Yankton.....	0	*†
Gardiner.....	8	14.0	<i>Utah</i>		
Greenville.....	21	22.0	Manti.....	4	.....
Portland.....	1	0.0	Moab.....	T.	.....
Van Buren.....	28	.....	Modena.....	T.	.....
<i>Massachusetts</i>			Salt Lake City.....	1	.....
Holyoke.....	0	4.0	Silver Lake.....	59	.....
<i>Michigan</i>			<i>Vermont</i>		
Alpena.....	T.	16.0	Brattleboro.....	0	12.0
Escanaba.....	2	16.0	Burlington.....	T.	?
Grayling.....	12	.....	Northfield.....	T.	.....
Houghton.....	10	15.0	St. Johnsbury.....	2	.....
Iron Mountain.....	3	.....	White River Junction.....	T.	.....
Ironwood.....	10	.....	<i>Washington</i>		
Mackinaw.....	2	.....	Berne.....	25	.....
Marquette.....	6	3.0	Paradise Inn.....	101	.....
Newberry.....	12	.....	Sullivan Lake.....	12	.....
Sault Ste. Marie.....	13	20.0	Twisp.....	14	.....
<i>Minnesota</i>			<i>Wisconsin</i>		
Baudette.....	4	.....	Green Bay.....	0	1.0
Duluth.....	T.	20.5	Wausau.....	0	?
Ely.....	19	.....	<i>Wyoming</i>		
Leech Lake Dam.....	5	.....	Casper.....	5	.....
Moorhead.....	0	23.0	Cheyenne.....	T.	.....
Roseau.....	4	.....	Dixon.....	3	.....
<i>Montana</i>			Dome Lake.....	31	.....
Kalispell.....	T.	.....	Sheridan.....	T.	.....
Missoula.....	T.	.....	South Pass City.....	10	.....
Red Lodge.....	2	.....	Yellowstone Park.....	1	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

Depth of Snow on Ground, 8 p. m., February 24, 1930



NOTE.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

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As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 12

WASHINGTON, D. C., MARCH 5, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED MARCH 3

The week opened with an extensive storm area covering the Middle Atlantic States, the Great Lakes and sections to westward, including the upper Mississippi and upper Missouri Valleys, and thence southward to eastern Texas; this was accompanied by many thunderstorms, with rather heavy precipitation in a few localities, but generally the precipitation was light to moderate. Unusually warm weather prevailed in the central valleys and to eastward at this time. This storm area was followed by fair weather and lower temperatures throughout much of the East toward the middle of the week. Light precipitation also prevailed during the first half of the week from the central Pacific region eastward over much of the Plateau region. About the middle of the week a storm area from the Pacific crossed the central Rocky Mountain region and moved northeastward to the Great Lakes and eastward, and was accompanied by rather heavy precipitation, largely snowfall, over the northern districts from the Great Plains eastward.

Toward the latter part of the week a low-pressure area moved from the Gulf northeastward along the coast to the Canadian Maritime Provinces, and throughout most regions east of the Mississippi was accompanied by moderate to generous precipitation—mostly snowfall, except in the South.

This low area was followed by a high-pressure area and fair weather, and by the end of the week a cold wave overspread most eastern sections. Some scattered snows occurred at this time in the upper Ohio Valley and lower Lake region, and to northeastward.

DEPTH OF SNOW ON GROUND

Considerable snow fell during the week, and the southern limit of snow on ground, reported last week, was extended from central New England, northern New York, and the upper Lake region southward along the eastern portions of the Allegheny Mountains to northern Tennessee, thence northwestward to northern Iowa and southwestward to the Rocky Mountains. In most sections the falls were light, except rather generous amounts were received in portions of the Allegheny Mountains from New York to West Virginia; likewise some of the higher elevations of the Rocky Mountain and Plateau regions received rather generous falls.

The only important increases in the snow depth were in the northern New England States and throughout the upper Lake region and westward to central North Dakota. The increases in the high elevations in California were generally small. While many of the areas usually covered by snow at this season of the winter were bare last week, they are now again covered, although in many regions the covering is light.

ICE IN RIVERS AND HARBORS

The ice still holds on the streams in northern New England and in the upper portions of the Mississippi and Missouri Rivers. The Hudson River is reported open everywhere below Glens Falls; navigation up to Albany opened March 1.

The ice conditions over the Great Lakes are shown in the following telegram from the official in charge at Detroit, Mich.:

Duluth-Superior harbor, solid; ice field in Lake Superior extends 16 miles beyond Two Harbors; small drifting fields central portion; fields extend beyond vision at Whitefish Point. From Whitefish Bay to Detour, ice solid. Green Bay, north end solid; open water south end. Michigan, no fields along west shore nor along east shore to beyond Frankfort; drifting fields off Charlevoix; straits solid. Huron, extensive fields extreme north; drifting fields central portion; open water south. St. Clair River, Lake St. Clair, and Detroit River, open. Erie, no ice west and central portions; from Erie east to Buffalo, extensive fields, but open water showing. Ontario, ice fields confined to extreme east end.

M. C. BENNETT,

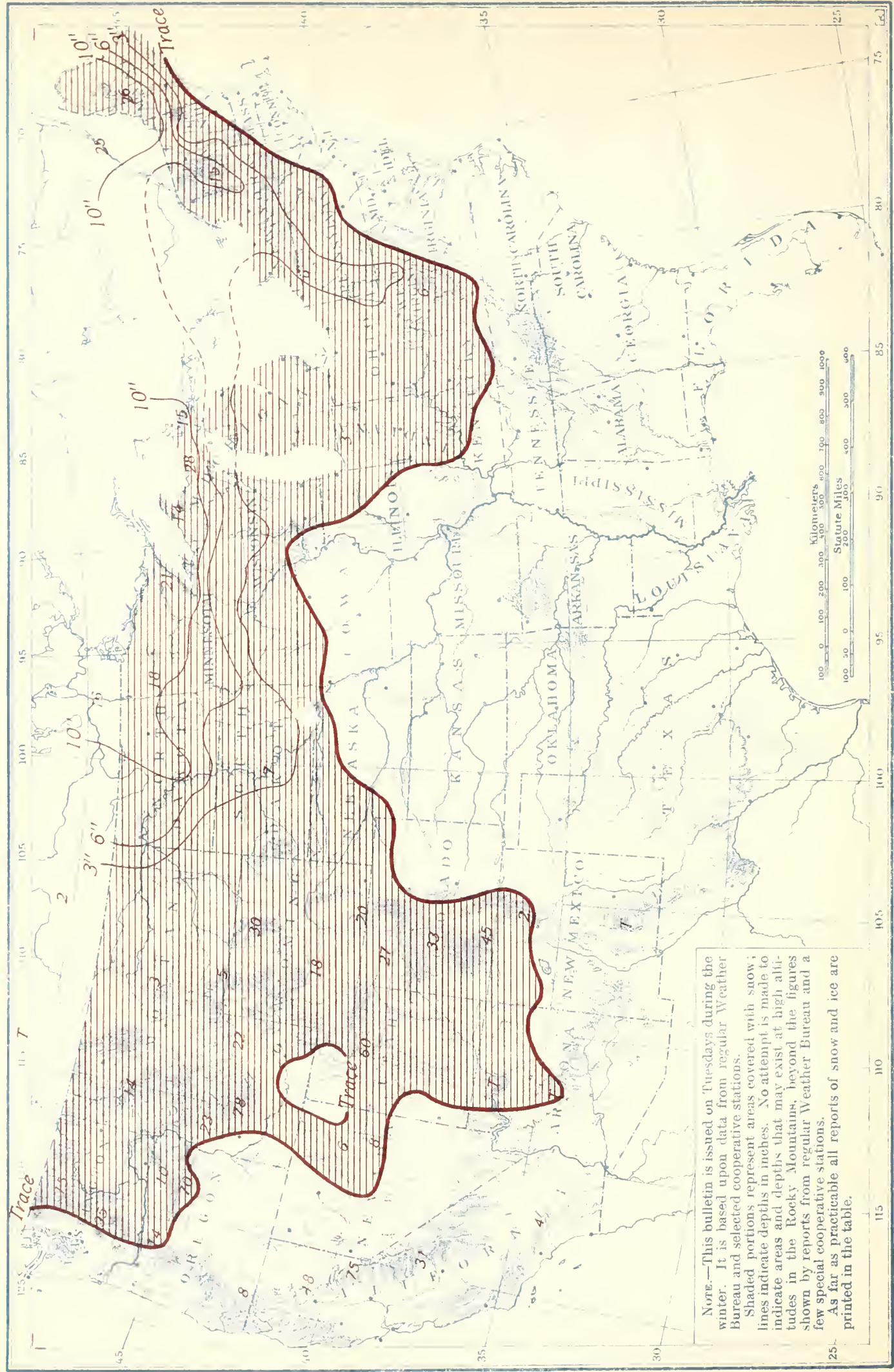
Temporarily in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., MARCH 3, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>New Hampshire</i>	<i>Inches</i>	<i>Inches</i>
Barrow.....	14	.....	Concord.....	0	12.0
Eagle.....	15	.....	Hanover.....	1	.....
Juneau.....	15	.....	Pittsburg.....	21	.....
Nome.....	48	.....	<i>New Mexico</i>		
<i>California</i>			Chacon.....	2	.....
Huntington Lake....	31	.....	Chama.....	16	.....
McCloud.....	7	.....	Elizabethtown.....	2	.....
Norden.....	75	.....	<i>New York</i>		
Squirrel Inn.....	4	.....	Alfred.....	6	.....
<i>Colorado</i>			Buffalo.....	1	7.0
Dillon.....	31	.....	Canton.....	2	.....
Rico.....	13	.....	Ithaca.....	4	.....
Steamboat Springs....	27	.....	Jamestown.....	6	.....
<i>Idaho</i>			Norwich.....	5	.....
Big Creek.....	22	.....	Oswego.....	4	†
McCall.....	23	.....	Rochester.....	3	0.0
Pierce City.....	23	.....	Rome.....	8	.....
Soldier Creek.....	17	.....	Saranac Lake.....	4	.....
Vienna Mine.....	78	.....	<i>North Dakota</i>		
<i>Indiana</i>			Bismarck.....	10	24.0
Marion.....	2	.....	Ellendale.....	4	.....
Notre Dame.....	3	.....	Williston.....	8	‡
<i>Iowa</i>			<i>Ohio</i>		
Des Moines.....	0	*	Charlestown.....	2	.....
Dubuque.....	0	†	Columbus.....	1	0.0
Estherville.....	1	.....	Dover.....	2	.....
<i>Kentucky</i>			Tiffin.....	1	.....
Beattyville.....	1	.....	<i>Oregon</i>		
Maysville.....	1	.....	Fish Lake.....	8	.....
<i>Maine</i>			Government Camp....	14	.....
Greenville.....	26	26.0	Imperial Mine.....	70	.....
Millinocket.....	23	.....	Olive Lake.....	28	.....
<i>Massachusetts</i>			Wallowa.....	4	.....
Williamstown.....	2	.....	<i>Pennsylvania</i>		
<i>Michigan</i>			Beaver Falls.....	2	.....
Alpena.....	3	30.0	Emporium.....	3	.....
Battle Creek.....	2	.....	Erie.....	2	1.0
Cadillac.....	2	.....	Franklin.....	5	.....
Detroit.....	1	†	Johnstown.....	5	.....
East Jordan.....	4	.....	Pittsburgh.....	4	0.0
Escanaba.....	4	19.0	Towanda.....	2	.....
Houghton.....	14	15.0	<i>South Dakota</i>		
Ironwood.....	14	.....	Huron.....	5	5.0
Mackinaw.....	5	.....	Pierre.....	7	†
Munising.....	28	.....	Yankton.....	T.	*†
Sault Ste. Marie.....	15	21.0	<i>Utah</i>		
<i>Minnesota</i>			Silver Lake.....	60	.....
Baudette.....	14	.....	<i>Vermont</i>		
Duluth.....	12	24.5	Burlington.....	8	‡
Fort Ripley.....	9	.....	Rutland.....	6	.....
Grand Meadow.....	2	.....	St. Johnsbury.....	2	.....
Minneapolis.....	1	.....	<i>Washington</i>		
Moorhead.....	6	21.0	Berne.....	25	.....
Virginia.....	21	.....	Paradise Inn.....	95	.....
<i>Montana</i>			Twisp.....	15	.....
Dillon.....	9	.....	<i>West Virginia</i>		
Haugan.....	14	.....	Camden-on-Gauley...	6	.....
Helena.....	4	.....	Clarksburg.....	2	.....
Loweth.....	2	.....	Elkins.....	3	0.0
Stanford.....	3	.....	Wheeling.....	5	.....
<i>Nebraska</i>			<i>Wisconsin</i>		
Hyannis.....	3	.....	Fond du Lac.....	1	.....
Imperial.....	1	.....	Park Falls.....	6	.....
Omaha.....	0	†	Spooner.....	4	.....
Valentine.....	1	.....	Wausau.....	3	8.0
<i>Nevada</i>			<i>Wyoming</i>		
Arthur.....	6	.....	Evanston.....	3	.....
Austin.....	5	.....	Foxpark.....	20	.....
McGill.....	6	.....	Lander.....	3	.....
North Fork.....	3	.....	Newcastle.....	2	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

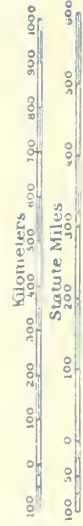
Depth of Snow on Ground, 8 p. m., March 3, 1930



Note.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist at high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.



SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief

No. 13

WASHINGTON, D. C., MARCH 12, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED MARCH 10

The week opened with clear weather and moderate temperatures over practically all parts of the country, these continuing for several days, except for some local rains or snows in the far West on the 5th, which, by the following day, had extended into the Plateau region, and low pressures had developed along the eastern slope of the Rocky Mountains, but without precipitation. By Friday morning pressure had formed a single center over the southern Ohio drainage area, and some heavy rains had occurred over near-by areas, especially to southward as far as the Gulfcoast. The storm center moved northeastward to the middle Atlantic coast by Saturday morning, attended by generous rains along the entire Atlantic coast, the falls being mostly heavy along or near the coast to southern New England and extending westward into the Ohio Valley and near-by areas, and the storm passed into eastern Canada by the close of the week. A less intense storm followed; it was centered in eastern Colorado on the 9th and advanced to Iowa by the morning of the 10th. Some snow fell that day to northward or westward of the center, in the vicinity of Lake Superior.

DEPTH OF SNOW ON GROUND

There was practically no snowfall during the week east of the Rocky Mountain Divide, except in a few localities in northern New England and the upper Lake region moderate falls were received. Along the Rocky Mountain Divide and to westward some of the more elevated regions reported small to moderate amounts, and a few places in the Pacific States reported like falls.

The area now covered with snow is materially less than was reported last week. Throughout the East the northward retreat of the snow limit was general. East of the Rocky Mountains, only the northern portions of New York and the New England States, a limited area in southwestern New York and northwestern Pennsylvania, and a comparatively small portion of the upper Lake region, with northern Minnesota and North Dakota, now are covered.

A considerable portion of the lower elevations of the western mountains now has very little snow, but many of the higher elevations received moderate amounts and most portions of the East still have a substantial cover, with little change in its depth.

ICE IN RIVERS AND HARBORS

Owing to the generally moderate temperatures throughout the week, the thickness of the ice continued to decrease in practically all districts. In the upper portions of the Mississippi and Missouri Rivers only floating or shore ice is reported, except in a few localities in the far North.

Navigation in the lower Connecticut River is expected to be fully resumed about the 17th. The ice conditions over the Great Lakes are shown in the following telegram from the official in charge at Detroit, Mich.:

Duluth-Superior, harbor solid; western Lake Superior, field extends out 6 miles; floating fields central portion; extensive fields east portion. Whitefish Bay, solid, with softening ice at Sault Ste. Marie. Green Bay, ice solid north and central; opening in extreme south. Michigan, no field along west shore; small fields along east shore to north of Ludington; heavy, moving fields off Charlevoix; straits solid with 18-inch ice. Huron, extensive fields north, with open water south of Thunder Bay Island; moving fields central portion; no ice south. South portion St. Clair River open to Algonae. Ice running freely out of Lake St. Clair and Detroit River. Erie, west and central portions free, with extensive windrowed fields Erie to Buffalo. Ontario, fields confined to extreme east end.

M. O. BENNETT,

Temporarily in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., MARCH 10, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Nevada</i>	<i>Inches</i>	<i>Inches</i>
Barrow.....	15		Arthur.....	2	
Bethel.....	5		Austin.....	1	
Cordova.....	54		Kimberly.....	2	
Eagle.....	15		McGill.....	2	
Fort Yukon.....	12		North Fork.....	T.	
Juneau.....	14		<i>New Hampshire</i>		
Nome.....	45		Hanover.....	T.	
Tanana.....	19		Laneaster.....	1	
<i>Arizona</i>			Pittsburg.....	30	
Flagstaff.....	T.		<i>New Mexico</i>		
<i>California</i>			Aurora.....	8	
Blue Canyon.....	24		Chacon.....	5	
Huntington Lake.....	37		Chama.....	6	
McCloud.....	T.		Clouderoft.....	T.	
Maumbar.....	11		Des Moines.....	1	
Norden.....	86		<i>New York</i>		
Relief.....	51		Alfred.....	5	
Sierraville.....	2		Beaver River.....	12	
<i>Colorado</i>			Buffalo.....	0	7.0
Crested Butte.....	43		Canton.....	3	
Dillon.....	39		Delhi.....	2	
Leadville.....	5		Ithaca.....	T.	
Rico.....	12		Jamestown.....	1	
Steamboat Springs.....	27		Lake Placid.....	8	
<i>Idaho</i>			Malone.....	14	
Big Creek.....	24		Norwieh.....	2	
Hailey.....	6		Old Forge.....	11	
Idaho City.....	13		Olean.....	T.	
Ketchum.....	15		Rochester.....	2	0.0
Kirkham.....	10		Saranee Lake.....	8	
McCall.....	23		<i>North Dakota</i>		
Mascot Mine.....	41		Bismarck.....	5	22.0
Pierce City.....	24		Devils Lake.....	2	
Shake Creek.....	10		Ellendale.....	T.	
Soldier Creek.....	15		Williston.....	T.	?
Spencer.....	14		<i>Oregon</i>		
Vienna Mine.....	72		Fish Lake.....	2	
<i>Maine</i>			Government Camp.....	18	
Eastport.....	T.	0.0	Imperial Mine.....	68	
Farmington.....	10		Meacham.....	6	
Gardiner.....	T.	6.0	Olive Lake.....	28	
Greenville.....	23	25.0	<i>Pennsylvania</i>		
Houlton.....	18		Franklin.....	T.	
Van Buren.....	20		Warren.....	2	
<i>Michigan</i>			<i>South Dakota</i>		
Alpena.....	T.	30.0	Huron.....	0	4.0
Detroit.....	0	†	Pierre.....	0	†
Escanaba.....	2	19.0	<i>Utah</i>		
Grayling.....	9		Manti.....	T.	
Houghton.....	10	13.0	Silver Lake.....	66	
Iron Mountain.....	2		<i>Vermont</i>		
Ironwood.....	6		Brattleboro.....	0	†
Mackinaw.....	2		Burlington.....	T.	?
Marquette.....	7	9.0	Northfield.....	T.	
Munising.....	22		<i>Washington</i>		
Newberry.....	10		Berne.....	24	
Sault Ste. Marie.....	7	18.5	Paradise Inn.....	103	
<i>Minnesota</i>			<i>Wisconsin</i>		
Baudette.....	9		Eau Claire.....	T.	
Duluth.....	2	21.5	Medford.....	T.	
Ely.....	6		Wausau.....	1	†
Fort Ripley.....	5		<i>Wyoming</i>		
Leech Lake Dam.....	10		Alta.....	18	
Minneapolis.....	T.		Casper.....	T.	
Moorhead.....	T.	15.0	Cheyenne.....	T.	
Thief River Falls.....	10		Cody.....	T.	
Virginia.....	30		Dixon.....	T.	
<i>Montana</i>			Lander.....	T.	
Haugan.....	14		South Pass City.....	16	
Red Lodge.....	4		Yellowstone Park.....	2	

*Shore ice. †Floating ice. ‡Ice gorged. \$Measurement impracticable.
T. indicates trace.

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Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist at high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist at high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief

No. 14

WASHINGTON, D. C., MARCH 19, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED MARCH 17

The storm referred to in the last issue as central over Iowa on March 10 moved to the upper Lakes by the beginning of the week and later extended into the districts to eastward, including an offshoot that covered all Atlantic coast sections from Florida northward and locally over the Ohio Valley. Some snow occurred in connection with this storm in the Lake region and at elevated points in the Appalachian Mountains.

In most other districts fair weather prevailed for several succeeding days, though rain set in by Friday morning over the south Pacific coast, and local light snows occurred in the upper Missouri Valley and over the Canadian Maritime Provinces.

During Saturday and Sunday the precipitation area in the Southwest advanced into the southern Rocky Mountains, attended by local heavy rains in parts of southern California and by snow in the near-by mountains of the State, as well as to the eastward in portions of Arizona and other parts of the Southwest. The precipitation became rather light or entirely ceased as the storm advanced into the southern Rocky Mountains, from whence it moved rapidly to the Great Lakes by Monday, being attended by light precipitation only in that region.

The week closed without important precipitation, though light rains were in prospect over many eastern districts.

For the week, as a whole, the average temperature was above normal in practically all parts of the country, the week being particularly warm in the central valleys, but there were small areas in the Southeast and the far West where the average was slightly below normal. Freezing occurred at numerous elevated points in the West and over many northern districts.

Precipitation was light over many northern and central districts, especially to the westward of the Mississippi River, but good falls occurred at many points in California and near-by portions of Arizona, and moderate falls were reported from eastern Texas and near the Gulf coast:

DEPTH OF SNOW ON GROUND

At the close of the week the snow-covered area was slightly greater than at the end of the preceding week, though no deep falls were noted save in portions of southern California and northern Arizona and locally in the Rocky Mountain region. There were local decreases at many points in the mountains from northern California to Washington, in parts of Colorado, and the upper Lake region, and the snow cover has practically disappeared in the major portion of the upper Lake region.

The heavy rains and snows in California and other portions of the Southwest during the latter part of the week added greatly to the prospective water supply, though the indications point to a flow less than average next summer over many portions.

ICE IN RIVERS AND HARBORS

There were decreases in the ice over all regions where it existed at the close of the previous week, save in one or two instances, and no ice is now reported on the rivers save the upper Missouri and those of northern New England.

The ice conditions on the Great Lakes are set forth in the following telegram from the official in charge at Detroit, Mich.:

Superior, field extends out 5 miles from Duluth; no change at Port Arthur; extensive fields over central and east portions. Whitefish Bay, solid; St. Marys River, ice softening. Green Bay, ice extends from Escanaba to near Green Bay. Michigan, no ice along west shore nor east shore to north of Ludington; heavy fields off Charlevoix; no change at Straits. Huron, extensive fields north portion and moving fields east shore; no ice reported from Harbor Beach to Port Huron. St. Clair River, Lake St. Clair, and Detroit River, open. Erie, no ice west and central portions; extensive windrowed fields from off Erie to Buffalo. Ontario, fields extreme east portion. St. Lawrence River reported open.

P. C. DAY,

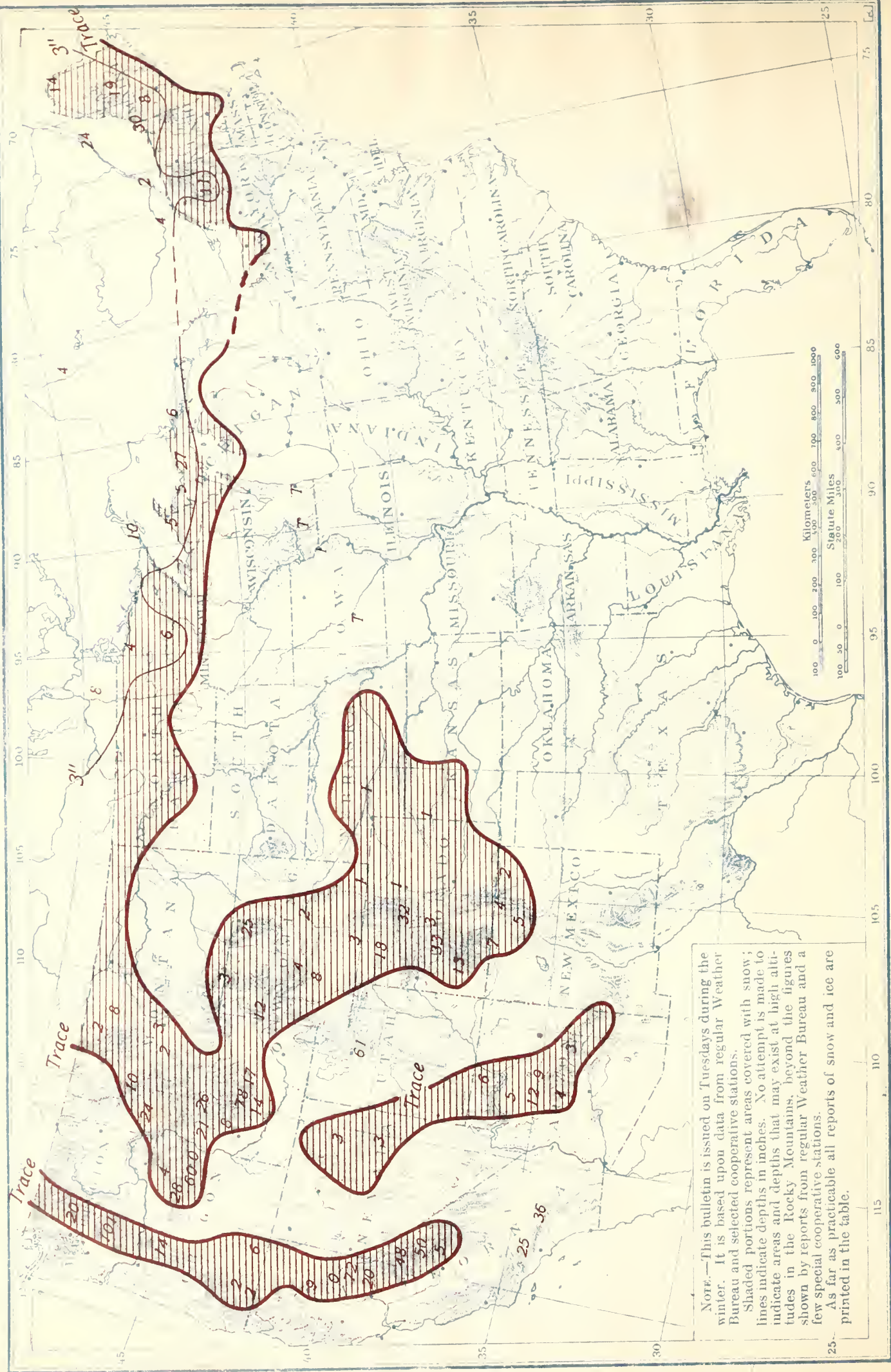
Meteorologist, in charge of Division.

SNOW DEPTH AND ICE THICKNESS, 8 P. M., MARCH 17, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Montana</i>	<i>Inches</i>	<i>Inches</i>
Barrow.....	15	.....	Browning.....	2	.....
Cordova.....	56	.....	Choteau.....	8	.....
Eagle.....	21	.....	Haugan.....	10	.....
Fort Yukon.....	13	.....	Havre.....	3	.....
Juneau.....	7	.....	Helena.....	3	.....
Nome.....	50	.....	Missoula.....	T.	.....
Tanana.....	23	.....	Philipsburg.....	2	.....
<i>Arizona</i>			Red Lodge.....	3	.....
Bright Angel.....	6	.....	<i>Nebraska</i>		
Flagstaff.....	9	.....	Hyannis.....	1	.....
Grand Canyon.....	5	.....	Imperial.....	1	.....
Pinedale.....	3	.....	Lincoln.....	T.	.....
Prescott.....	4	.....	Norfolk.....	T.	.....
Williams.....	12	.....	North Platte.....	1	.....
<i>California</i>			<i>Nevada</i>		
Big Creek.....	5	.....	Arthur.....	3	.....
Blue Canyon.....	20	.....	Austin.....	2	.....
Huntington Lake.....	50	.....	Kimberly.....	3	.....
Macumber.....	9	.....	McGill.....	1	.....
Mount Wilson.....	25	.....	North Fork.....	2	.....
Norden.....	72	.....	<i>New Hampshire</i>		
Relief.....	48	.....	Concord.....	2	0.0
Squirrel Inn.....	36	.....	Littleton.....	T.	1.0
<i>Colorado</i>			Pittsburg.....	30	.....
Crested Butte.....	33	.....	<i>New Mexico</i>		
Denver.....	1	.....	Aurora.....	3	.....
Dillon.....	32	.....	Chama.....	7	.....
Leadville.....	3	.....	Des Moines.....	2	.....
Rico.....	13	.....	Elizabethtown.....	4	.....
Steamboat Springs.....	18	.....	Fort Bayard.....	T.	.....
<i>Idaho</i>			Tres Piedras.....	5	.....
Big Creek.....	26	.....	Truchas.....	5	.....
Hailey.....	3	.....	<i>New York</i>		
Idaho City.....	8	.....	Buffalo.....	0	6.5
Ketchum.....	17	.....	Canton.....	T.	.....
Kirkham.....	6	.....	Old Forge.....	11	.....
McCall.....	21	.....	Rochester.....	T.	0.0
Mackay.....	5	.....	<i>North Dakota</i>		
Pierce City.....	24	.....	Bismarck.....	1	20.0
Shake Creek.....	8	.....	Williston.....	T.	‡
Soldier Creek.....	14	.....	<i>Oregon</i>		
Vienna Mine.....	78	.....	Fish Lake.....	2	.....
<i>Iowa</i>			Government Camp.....	14	.....
Des Moines.....	T.	0.0	Imperial Mine.....	60	.....
Dubuque.....	1	0.0	Lakeview.....	6	.....
<i>Kansas</i>			Meacham.....	4	.....
Dodge City.....	T.	.....	Olive Lake.....	28	.....
Goodland.....	1	.....	Silver Lake.....	1	.....
Wakeeney.....	T.	.....	Siskiyou.....	2	.....
<i>Maine</i>			<i>South Dakota</i>		
Farmington.....	8	.....	Pierre.....	0	†
Gardiner.....	1	*	<i>Utah</i>		
Greenville.....	19	26.0	Modena.....	T.	.....
Van Buren.....	14	.....	Silver Lake.....	61	.....
<i>Michigan</i>			<i>Vermont</i>		
Alpena.....	0	†	Burlington.....	T.	‡
Escanaba.....	T.	18.5	Northfield.....	1	.....
Houghton.....	5	10.0	<i>Washington</i>		
Mackinaw.....	1	.....	Berne.....	20	.....
Marquette.....	5	7.0	Paradise Inn.....	101	.....
Munising.....	27	.....	<i>Wyoming</i>		
Sault Ste. Marie.....	6	15.0	Alta.....	12	.....
<i>Minnesota</i>			Barnum.....	1	.....
Baudette.....	4	.....	Casper.....	2	.....
Duluth.....	T.	19.0	Cheyenne.....	1	.....
Ely.....	1	.....	Dixon.....	3	.....
Leech Lake Dam.....	6	.....	Dome Lake.....	25	.....
Moorhead.....	0	14.0	Lander.....	4	.....
Roseau.....	3	.....	Sheridan.....	T.	.....
Thief River Falls.....	2	.....	South Pass City.....	8	.....

*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable. T. indicates trace.

Depth of Snow on Ground, 8 p. m., March 17, 1930



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As far as practicable all reports of snow and ice are printed in the table.

SNOW AND ICE BULLETIN

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU
CHARLES F. MARVIN, Chief

No. 15

WASHINGTON, D. C., MARCH 26, 1930

WINTER 1929-30

GENERAL SUMMARY OF THE WEATHER FOR THE WEEK ENDED MARCH 24

The week opened with generally light to moderate precipitation over much of the country, except the upper Lake region and thence westward to the Pacific and throughout the Pacific States, except the southern portion of California, the precipitation being mostly snow in the Northeast and the central Rocky Mountain region. By Wednesday the precipitation area extended from Texas to the Great Lakes and eastward to the Atlantic, thunderstorms, with rather heavy rain, occurring in many of the central and southern localities; also a storm, with light snow, prevailed in the far Northwest. During the next 24 hours this storm moved to the upper Lake region, but was accompanied by very little precipitation, mostly snow; light snow also fell in portions of the Dakotas and Montana, and light rain was received in portions of the South Atlantic and east Gulf States. By the middle of the week the weather was generally fair throughout the country, except in a few scattered localities in the far East and along the north Pacific coast.

During the next two days a storm area moved from the Southwest over the Gulf, with precipitation throughout most portions of the Gulf and South Atlantic States, the falls in some localities being rather heavy. Another storm area moved in from the Northwest, with light snow, and light rain fell also in portions of the North Pacific States and the northern Plateau region. The week closed with precipitation in the central and southern portions of the South Atlantic States, save in the southern half of Florida, with some generous to heavy falls. A precipitation area also overspread the regions from the eastern slope of the Rocky Mountains to the upper Lake region, throughout most of the Missouri Valley and the Mississippi Valley southward to Arkansas, and also a few localities in the North Pacific States recorded rather heavy precipitation.

Throughout the week the weather was cold in the North generally, with freezing temperatures as far south as the central portions of the great valleys during the early and middle parts of the week, but throughout the southern areas mild temperatures generally prevailed.

DEPTH OF SNOW ON GROUND

At the close of the week the snow-covered area was generally less than at the end of the preceding week, except a small area in Minnesota and Wisconsin where it was slightly more. The falls were generally light in all districts, except in a few localities in the higher mountain regions in Washington, Idaho, and Wyoming, and the snow cover has practically disappeared east of the Rocky Mountains, except in the northern portions of New England and New York, the upper Lake region, and portions of Wisconsin and Minnesota. In northern Maine and extreme northern New Hampshire the snow is still very deep, but in the Adirondacks the depths reported are small.

The snowfall now stored in the higher elevations of California and other portions of the Southwest indicates a prospective water supply next summer of rather less than the average over many sections.

ICE IN RIVERS AND HARBORS

There was a decided decrease in the thickness of the ice at most stations in the North and Northwest where it existed at the close of last week, while there was a slight increase in the eastern end of Lake Erie and locally in northern New England.

The ice conditions in the Great Lakes are set forth in the following telegram from the official in charge at Detroit, Mich.:

Duluth Harbor, ice softening; lake field extends out 3 miles; no change at Port Arthur; heavy fields off Keweenaw Point; few fields off Marquette; extensive field east end. Whitefish Bay, solid. St. Marys River, ice softening. Green Bay continues solid. Michigan, no fields west nor

SNOW DEPTH AND ICE THICKNESS, 8 P. M., MARCH 24, 1930

Stations	Snow	Ice in rivers, harbors, etc.	Stations	Snow	Ice in rivers, harbors, etc.
<i>Alaska</i>	<i>Inches</i>	<i>Inches</i>	<i>Minnesota</i>	<i>Inches</i>	<i>Inches</i>
Barrow.....	15	.....	Baudette.....	3	.....
Cordova.....	52	.....	Collegeville.....	2	.....
Eagle.....	55	.....	Duluth.....	1	16.0
Fort Yukon.....	13	.....	Fort Ripley.....	1	.....
Juneau.....	7	.....	Leech Lake Dam.....	5	.....
Nome.....	46	.....	Moorhead.....	T.	10.0
Tanana.....	23	.....	Mora.....	1	.....
<i>Arizona</i>			Roseau.....	3	.....
Bright Angel.....	8	.....	St. Paul.....	T.	0.0
Flagstaff.....	T.	.....	<i>Montana</i>		
Grand Canyon.....	1	.....	Haugan.....	6	.....
<i>California</i>			Missoula.....	1	.....
Blue Canyon.....	7	.....	<i>New Hampshire</i>		
Huntington Lake.....	26	.....	Littleton.....	2	4.0
Macomber.....	3	.....	Pittsburg.....	35	.....
Norden.....	54	.....	<i>New Mexico</i>		
Relief.....	38	.....	Aurora.....	1	.....
Squirrel Inn.....	3	.....	Chama.....	36	.....
<i>Colorado</i>			<i>New York</i>		
Crested Butte.....	25	.....	Beaver River.....	6	.....
Cumbres.....	47	.....	Buffalo.....	1	7.5
Dillon.....	34	.....	Canton.....	2	.....
Leadville.....	3	.....	Plattsburg.....	1	.....
Rico.....	6	.....	Rochester.....	T.	0.0
Steamboat Springs.....	13	.....	Saranac Lake.....	2	.....
<i>Idaho</i>			<i>North Dakota</i>		
Big Creek.....	30	.....	Bismarck.....	T.	12.0
Ketchum.....	11	.....	Williston.....	T.	?
McCall.....	21	.....	<i>Oregon</i>		
Mascot Mine.....	41	.....	Government Camp.....	20	.....
Pierce City.....	20	.....	Imperial Mine.....	66	.....
Shake Creek.....	9	.....	<i>South Dakota</i>		
Soldier Creek.....	9	.....	Pierre.....	0	+
Vienna Mine.....	84	.....	Rapid City.....	T.	.....
<i>Iowa</i>			Yankton.....	T.	0.0
Dubuque.....	T.	0.0	<i>Utah</i>		
Iowa Falls.....	1	.....	Silver Lake.....	57	.....
<i>Maine</i>			<i>Vermont</i>		
Farmington.....	12	.....	Burlington.....	T.	?
Gardiner.....	3	0.0	Northfield.....	1	.....
Greenville.....	21	27.0	St. Johnsbury.....	1	.....
Millinocket.....	21	.....	<i>Washington</i>		
Portland.....	T.	0.0	Berne.....	22	.....
Van Buren.....	12	.....	Paradise Inn.....	144	.....
<i>Michigan</i>			Twisp.....	3	.....
Alpena.....	T.	+	<i>Wisconsin</i>		
Bad Axe.....	4	.....	Eau Claire.....	4	.....
Benzonia.....	1	.....	Fond du Lac.....	5	.....
Cadillac.....	3	.....	Green Bay.....	2	0.0
East Jordan.....	3	.....	Madison.....	3	.....
Escanaba.....	2	18.5	Milwaukee.....	2	.....
Grayling.....	9	.....	Wausau.....	3	0.0
Houghton.....	2	?	<i>Wyoming</i>		
Iron Mountain.....	2	.....	Alta.....	8	.....
Ludington.....	2	.....	Dome Lake.....	34	.....
Marquette.....	4	4.0	Evanston.....	1	.....
Munising.....	27	.....	Newcastle.....	2	.....
Sault Ste. Marie.....	5	15.0	South Pass City.....	5	.....

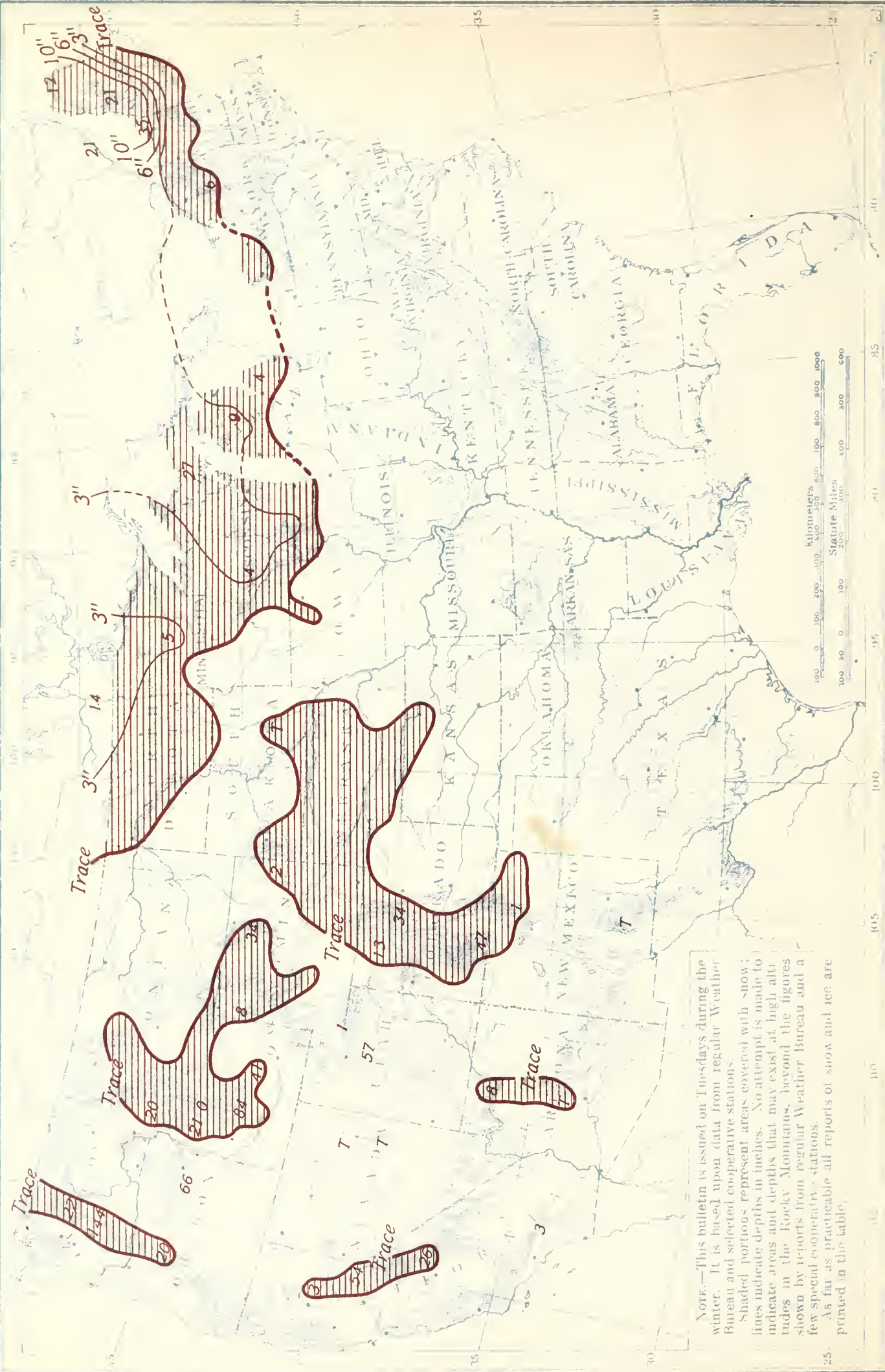
*Shore ice. †Floating ice. ‡Ice gorged. §Measurement impracticable.
T. indicates trace.

east shore north to Manitou Island; heavy fields off Charlevoix. No change at Straits. Huron, extensive fields north portion and along east shore. No fields Harbor Beach to Port Huron. St. Clair River, Lake St. Clair, and Detroit River, open. Erie, fields confined to east end and somewhat windrowed. Ontario, fields extend to east portion. St. Lawrence River, open.

M. C. BENNETT,
Temporarily in charge of Division.

This issue closes the season of the Snow and Ice Bulletin of 1929-30. Further reports on the ice conditions in the Great Lakes will be issued weekly from the Detroit office.

Depth of Snow on Ground, 8 p. m., March 24, 1930



NOTE.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations.

Shaded portions represent areas covered with snow; lines indicate depths in inches. No attempt is made to indicate areas and depths that may exist at high altitudes in the Rocky Mountains, beyond the figures shown by reports from regular Weather Bureau and a few special cooperative stations.

As far as practicable all reports of snow and ice are printed in the table.